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MONTEREY, CALIFORNIA

THESIS

MITIGATING DEPARTMENT OF DEFENSE INSIDER ATTACKS AND MISCONDUCT: CRITICAL PERSONNEL SCREENING METHODOLOGIES WITHIN THE HUMAN CAPITAL ACQUISITION PROCESS

by

Michael T. Clapper

December 2020

Thesis Advisor: Leo J. Blanken
Second Reader: John D. Tullius

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Throughout the last decade, the Department of Defense (DOD) has experienced dozens of malicious insider attacks, causing significant damage to U.S. national security and the needless loss of life from mass shootings. Senior officials with the White House, the DOD, and other federal agencies have directed the development of new human-capital acquisitions processes to mitigate selecting federal civilians and military personnel who are susceptible to committing misconduct or insider attacks. The statistical relevance surrounding the DOD personnel problems associated with misconduct and significant insider attacks reinforces the need for reformed methodologies specifically directed toward the human-capital acquisitions process. This capstone report first demonstrates the scientific evidence and behavioral similarities associated with individuals who engage in misconduct and historical malicious insider attacks within the DOD. The intent is to then justify the implementation of innovative screening methodologies within the acquisition process to disqualify applicants with severe indicators of vulnerable predisposition precursors exhibited by individuals who commit misconduct and insider attacks. The report's recommended Enhanced Assessment Program focuses efforts on preliminarily screening tentative candidates for mental health disorders and personality traits as an initial point to identify the threat-vulnerable predisposition precursors for further evaluation.

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MITIGATING DEPARTMENT OF DEFENSE INSIDER ATTACKS AND MISCONDUCT: CRITICAL PERSONNEL SCREENING METHODOLOGIES WITHIN THE HUMAN CAPITAL ACQUISITION PROCESS

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Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF SCIENCE IN DEFENSE ANALYSIS
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ABSTRACT

Throughout the last decade, the Department of Defense (DOD) has experienced dozens of malicious insider attacks, causing significant damage to U.S. national security and the needless loss of life from mass shootings. Senior officials with the White House, the DOD, and other federal agencies have directed the development of new human-capital acquisitions processes to mitigate selecting federal civilians and military personnel who are susceptible to committing misconduct or insider attacks. The statistical relevance surrounding the DOD personnel problems associated with misconduct and significant insider attacks reinforces the need for reformed methodologies specifically directed toward the human-capital acquisitions process. This capstone report first demonstrates the scientific evidence and behavioral similarities associated with individuals who engage in misconduct and historical malicious insider attacks within the DOD. The intent is to then justify the implementation of innovative screening methodologies within the acquisition process to disqualify applicants with severe indicators of vulnerable predisposition precursors exhibited by individuals who commit misconduct and insider attacks. The report's recommended Enhanced Assessment Program focuses efforts on preliminarily screening tentative candidates for mental health disorders and personality traits as an initial point to identify the threat-vulnerable predisposition precursors for further evaluation.

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LIST OF ACRONYMS AND ABBREVIATIONS

ASVAB	Armed Services Vocational Aptitude Battery
CD-RISC	Connor-Davidson Resilience Scale
CWB	Counterproductive Work Behavior
DOD	Department of Defense
DSM	Diagnostic and Statistical Manual of Mental Disorders
EAP	Enhanced Assessment Program
MCMI	Millon Clinical Multiaxial Inventory
MEPS	Military Entrance Processing Station
MOS	Military Occupational Specialty
NEO-PI	Neuroticism-Extraversion-Openness Personality Inventory
NPS	Naval Postgraduate School
NSA	National Security Agency
PERSEREC	Personnel and Security Research Center
PFC	Private First Class
SFAS	Special Forces Selection and Assessment
UCMJ	Uniformed Code of Military Justice
VPP	Vulnerable Predisposition Profile

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I. INTRODUCTION

A. CAPSTONE REPORT GENESIS

The Department of Defense (DOD) Personnel and Security Research Center (PERSEREC) established "The Threat Lab" department in 2018 due to the increased activities by federal civilian employees and military personnel that cause significant damage to the United States national security. The Threat Lab is tasked with conducting research and analysis in order to identify the underlying social or behavioral characteristics that are associated with an individual that conducts harmful action against their employer, fellow employees, or the organization. The mission is to then provide educational resources, solutions, and recommendations, based on the identified criteria, to prevent or actively counter the wide-array of threats posed by inside actors within the DOD.

Threat Lab Director Stephanie Jaros discussed collaborative research opportunities with Naval Postgraduate School (NPS) students in order to support capstone projects that will ultimately enhance the DOD's ability to combat insider threats. This is an important task due to the DOD being the first line of defense to incorporate strategic national security for every United States citizen. Insider threat activity, misconduct, and other adverse action must be prioritized to ensure the DOD is operating at an optimized level and to mitigate any damage to national security.

The largest concern observed by government and DOD officials are the most egregious events conducted by inside employees that resulted in direct loss of life and the release of classified materials. The DOD responded to the recent insider attacks by implementing policies focused on efforts towards insider threat awareness education to support the identification of tentative insider threat throughout the workforce. The DOD and other federal organizations incorporate mandatory training applications and certification programs in the attempt to counter the internal threats through awareness towards typical indicators to support internal identification of those threats. For example, the DOD established the Certified Counter-Insider Threat Professional Program for

qualified candidates as well as required all federal employees and service members to conduct various annual certification programs with embedded procedures to identify and report insider threat activities.[1] These programs enable supervisors and employees to understand the importance of eliminating the threats while being able to assess the characteristics of an individual employee reaching a threshold that leads to a catastrophic event.

The insider threat awareness education approaches to thwart catastrophic insider-threats before a serious incident occurs are absolutely necessary. Unfortunately, this approach relies on an individual threat to openly articulate or demonstrate indicators for a vigilant group of employees to identify, report, and ultimately intervene against that threat. It is not difficult to conceive that there are opportunities for unintentional failure within this approach. Therefore, additional actions must be implemented to ensure an appropriate end result can be achieved.

Countering insider threat activities is undoubtedly a complex problem that requires a wide-array of solutions to mitigate future events. Experts that focus efforts towards countering "wicked problems," which are those considered to be the most complex and ill-structured problems, assert that there is not a definitive solution or set of solutions to ultimately eliminate those problems completely. Essentially, derived policies and methodologies will only mitigate the problem to a defendable level. The most important arguments from wicked problem experts are that significant analysis to frame the problem is required and established policies must incorporate review processes to adjust the aspects of the policy over time.[2] Furthermore, complex problem sets require scientific analysis to drive evidence-based approaches that derive policies that attack the underlying motivations within the problem.[3]

[1] "DOD Security Awareness Hub Annual Training Requirements," Defense Counterintelligence and Security Agency, 2020, https://securityawareness.usalearning.gov.

[2] Brian W. Head, "Forty Years of Wicked Problems Literature: Forging Closer Links to Policy Studies," *Policy and Society* 38, no. 2 (April 3, 2019): 180–97.

[3] Sandra Nutley, Isabel Walter, and Huw Davies, "Using Evidence: How Research Can Inform Public Services," *Bristol University Press*, 2007.

Overall, these assessed issues stem from the consistent occurrence of adverse actions ranging from simple misconduct to catastrophic insider threat activities causing damage to the United States' national security. Simple misconduct within the DOD should not be easily discounted as it fosters toxic environments and reduces overall effectiveness; however, the catastrophic threats are what gain the most attention that demand active responses. Therefore, there is a direct need to implement enhanced acquisition processes to hire federal civilian employees and select military personnel that are less susceptible to engaging in misconduct or commit insider attacks within the DOD.

The collaborative capstone project between the Threat Lab and NPS supports the initial analysis concerning innovative human capital management approaches utilizing science-based methodologies to develop enhanced workforce acquisition policies towards a "whole-person" assessment concept instituted by the U.S. Army Special Forces Selection and Assessment (SFAS) course. Ultimately, the utilization of self-report diagnostic assessment tools to identify mental health disorders and personality traits characterized as predisposition threat indicators associated with historical insider attacks and severe misconduct is necessary to initially screen tentative personnel. These diagnostic assessments provide the initial indication of the predisposition threats to initiate further evaluation with a behavioral health expert to confirm the existence of disqualifying conditions within the acquisition phase. This report details the rationale and justification for implementing a "whole-person" assessment methodology in order to mitigate future threats and misconduct by selecting personnel with susceptible predispositions to committing such actions.

The following sections within this chapter will analyze and frame the problem as well as the associated inputs using behavior and social sciences to prioritize the development of recommended DOD policies to mitigate insider-threat activity and personnel misconduct. Insider threats are inherently focused on human-risk factors. Throughout the last decade, senior officials within the White House, the DOD, and other federal agencies have assessed underlying problematic issues within the federal civilian employees as well as armed forces service members.

B. CAPSTONE REPORT IMPORTANCE

1. DOD Insider Threats

The most recent, notable DOD "insider-threat" attacks include the actions conducted by Major Nidal Hasan, Private First Class (PFC) Bradley Manning, and Edward Snowden. Within the DOD organizational structure, Major Hasan and PFC Manning were both active-duty military personnel while Edward Snowden was hired as a National Security Agency federal civilian employee. The three isolated attacks, by internal perpetrators, either caused significant harm to the United States' national security, resulted in significant casualties, or both. It is critical to analyze the associated traits of these individuals to highlight the unfortunate consequences of their actions as well as identify threat precursors to support the development of innovative acquisition solutions. Additionally, it is important to address the vast amount of misconduct, violence, criminal actions, and other adverse action that occurs throughout the DOD as a starting point to reduce the probability of a catastrophic insider-threat event.

The deadly action taken by Major Nidal Hasan is characterized as a kinetic insider attack due to the principle objective of the attack being to kill or injure others. Hasan was commissioned as an Army Psychiatrist in 2003 and served in the Psychiatric Program at Walter Reed Army Medical Center before being reassigned to Fort Hood, Texas. While stationed at Fort Hood, Hasan conducted one of the highest causalities, mass-shooting events by an American on a military base killing 12 Soldiers set to deploy to Afghanistan and one civilian in 2009.[4] Congressional investigations note that Hasan had been in contact with a known terrorist and Yemeni-American Muslim cleric named Anwar al-Awlaki.[5] Multiple communications between the two further radicalized Hasan to conduct the homicidal attack. Although military supervisors were unaware of this development at the

[4] Catina M Smith, Stephanie L Jaros, and Callie J Chandler, *Foreground Factors of DoD Workplace Homicide: A Comparative Case Analysis of Incidents Between 2009-2015*, TR-17-01 (Seaside, CA: Defense Personnel and Security Research Center, 2016), 6.

[5] U.S. Government Publishing Office, *Lessons from Fort Hood: Improving Our Ability to Connect the Dots*, 81-127 (Washington, DC: U.S. Government Publishing Office, 2013), 2.

time, Major Hasan had previously and overtly demonstrated the classic behavioral indicators typical to similar kinetic insider threat.

After critical analysis, experts determined that there were several indicators spanning multiple years of Hasan's service that demonstrated a developing threat. These indicators included disobeying orders, argumentative behavior, poor work performance, disciplinary action, and the vocal condemnation of military operations in predominately Muslim countries that suggested disloyalty to the Constitution and the Army.[6] There are a variety of other significant events in his personal life, such as the loss of immediate family members and being racially victimized after the September 11th terrorist attacks. It is assessed that these personal events, along with the professional issues, also contributed to Hasan's rationalization towards committing his atrocities.[7] Reports from fellow employees and supervisors within the Psychiatric Department insinuated that Hasan displayed paranoid, belligerent, and schizoid behaviors.[8] Although many of the demonstrated behaviors and events occurred after Hasan enlisted and later commission as an officer in the Army, his behavioral precursors correspond with the fundamental framework concerning insider threats.

Non-kinetic insider threats also have significant ramifications to national security. Depending on the objective of the attack, the results may lead to indirect loss of life similar to the insider events surrounding the unauthorized disclosure of classified documents by then PFC Bradley Manning. PFC Manning served as an Army Intelligence Analyst with a Top-Secret security clearance. While deployed to Iraq in 2010, PFC Manning transferred hundreds of thousands of documents and videos from classified servers to his personal computer using a writable compact disk.[9] According to Army officials, PFC Manning

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[6] Divya R Vargheese et al., *Preventing Kinetic Insider Threat: Assessing Gaps in DoD Insider Threat Policy and Procedure*, TR-17-09 (Seaside, CA: Defense Personnel and Security Research Center, 2017), 15.

[7] Smith, Jaros, and Chandler, *Foreground Factors of DoD Workplace Homicide: A Comparative Case Analysis of Incidents Between 2009-2015*, 15–16.

[8] Daniel Zwerdlin, "Walter Reed Officials Asked: Was Hasan Psychotic?," *NPR*, November 11, 2009, https://www.npr.org/templates/story/story.php?storyId=120313570.

[9] *United States, Appellee V. Private First Class Bradley E. Manning (NKA Chelsea E. Manning) United States Army, Appellant*, United States Court of Appeals (2018), 4.

then released the classified information, consisting of 250,000 Department of State diplomatic cables and 500,000 operational military reports to WikiLeaks.[10]

The released information included sensitive as well as damaging material regarding U.S. detention facilities in Iraq and Afghanistan, detainee reports, investigations concerning civilian casualties from U.S. military operations, future troop movements, and air-strike outcome reports. There is no doubt that the release of these classified documents disrupted military and diplomatic operations, damage the United States' international reputation, and incited large-scale skepticism from the American populace. PFC Manning objected to many of the military's methods in the Afghanistan and Iraq Wars. Overall, the base intent behind the release of the classified information was to promote unfiltered awareness of military actions, to include the countless civilian casualties, that occur throughout the course of conventional warfare.[11]

PFC Manning's court proceedings detailed personal diagnoses of suffering from anxiety as well as attributed personality disorder traits of narcissism and gender identity disorder prior to Manning joining the Army.[12] Professionally, PFC Manning was routinely disciplined for poor performance, other aggressive outbursts, and striking a Non-Commissioned Officer.[13] It is important to note that, the armed forces acquisition processes for Military Intelligence positions, including the required Top-Secret Clearance review, either did not identify the diagnoses or did not disqualify PFC Manning from entering active-duty service in the first place. Manning was able to continue standard

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[10] Julie Tate, "Pentagon Finally Releases Some Pre-Trial Documents from Bradley Manning Case," *The Washington Post*, February 27, 2013, https://www.washingtonpost.com/news/worldviews/wp/2013/02/27/pentagon-finally-releases-some-pre-trial-documents-from-bradley-manning-case/.

[11] Charlie Savage, "Soldier Admits Providing Files to WikiLeaks," *The New York Times*, February 28, 2013, https://www.nytimes.com/2013/03/01/us/bradley-manning-admits-giving-trove-of-military-data-to-wikileaks.html.

[12] Matthew Jacobson, "The Pathological Twisting of Bradley Manning: Part One," *Saybrook University New Existentialist Posts*, December 4, 2013, https://www.saybrook.edu/blog/2013/12/04/12-04-13/; and Serena Marshall, "Bradley Manning Apologizes; Defense Cites Rough Childhood, Gender Identity Disorder," *ABC News*, August 14, 2013, https://abcnews.go.com/blogs/politics/2013/08/bradley-manning-apologizes-for-espionage-defense-cites-rough-childhood-gender-disorder.

[13] Josh Gerstein, "Witnesses: Bradley Manning Boasted of Leak, Had Mental Problems," *Politico*, December 20, 2011, https://www.politico.com/blogs/under-the-radar/2011/12/witnesses-bradley-manning-boasted-of-leak-had-mental-problems-108230.

military duties as well as deploying to Iraq even after the severe professional misconduct events, command-level evaluations, and psychological screenings that documented the unstable issues and adverse action. The evaluations also did not instigate a revocation or temporary suspension of PFC Manning's Top-Secret Clearance. After a review of PFC Manning's history and actions, the various issues were well known; however, there were many failures throughout the various screening systems that were supposed to identify and prevent such potential threats.

Another widely known event concerning the release of classified material that caused damaged to U.S. national security was conducted by a DOD federal civilian contractor, Edward Snowden. While working in various positions for the National Security Agency (NSA), Snowden obtained access and downloaded classified material onto a personal hard-drive with the intent to distribute that information publicly. In 2013, after months of downloading 1.5 million documents, he released as many as 9,000 classified documents to the Washington Post and a reporter for the Guardian, Glenn Greenwald.[14] Greenwald published multiple articles concerning the classified documents as well as posted the majority of the documents online. Therefore, anyone in the world with internet access was able to view the classified documents including United States adversaries. These released documents caused significant harm to the United States' national security as many of the documents contain DOD critical defense capabilities but the exact specifics of the damage have been redacted by the U.S. government due to the related classified material.[15]

The detailed government report surrounding the Snowden case didn't identify significant mental health disorder diagnoses prior to him working for government agencies. The lack of actual diagnoses does not necessarily signal that there weren't these types of pre-existing issues, simply that Snowden may not have been treated or evaluated prior to his employment. According to reports, Snowden passed routine psychological exams while

[14] *Review Of The Unauthorized Disclosures of Former National Security Agency Contractor Edward Snowden* (Washington, DC: U.S. Government Publishing Office, 2016), 20.

[15] Deb Reichmann, "Costs of Snowden Leak Still Mounting 5 Years Later," *Associate Press*, June 3, 2018, https://apnews.com/797f390ee28b4bfbb0e1b13cfedf0593/Costs-of-Snowden-leak-still-mounting-5-years-later.

working for the CIA.[16] Despite this, the exact CIA psychological screening tools, evaluation criteria, and thresholds for failure are not available in open-source documentation. It is possible that Snowden embodied sub-clinical disorders that didn't register above the criteria to incite concern for his specific position by CIA standards for their psychological assessments to include being unofficially described as an anti-social, narcissist who lacked empathy through post-hoc analysis of his actions and comments.[17]

The Snowden government report did reveal; however, that he demonstrated negative behavioral indicators and poor work performance issues that can be associated with pre-existing personality disorders. These indicators included repeated interpersonal relationship issues as well as disobedience with supervisors and fellow employees, exhibited frustration with lack of access to classified information outside of his occupational scope, and openly stated that the United States government was exceeding authorities on surveillance programs to foreign nationals while in China.[18] Additionally, according to co-workers Snowden defended the actions of PFC Manning to illegally release classified documents to WikiLeaks.[19] In hindsight, the threat indicators should have triggered supervisors and fellow employees to further investigate his daily activities.

Unfortunately, Snowden was able to commit his insider attack causing significant harm to U.S. national security and then escape from justice. Snowden eventually reached an internal threshold that drove him to justify committing these acts in revenge or simply anger. In this case, Snowden was viewed as a "whistle-blower" by some and others as a

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[16] Robert Windrem, Tom Winter, and Mike Brunker, "Edward Snowden's Motive Revealed: He Can 'Sleep at Night,'" *NBC News*, May 28, 2014, https://www.nbcnews.com/feature/edward-snowden-interview/edward-snowdens-motive-revealed-he-can-sleep-night-n116851.

[17] Charlie Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," *Intelligence and National Security Alliance*, April 2017, 9–10; Jack Devine, "Snowden Is The Kind of Guy I Used to Recruit in Russia," *Politico*, May 13, 2014, https://www.politico.com/magazine/story/2014/05/snowden-is-the-kind-of-guy-i-used-to-recruitin-russia-106648; and Romesh Renesar, "The Unbearable Narcissism of Edward Snowden," *Bloomberg Businessweek*, November 1, 2013, https://www.bloomberg.com/news/articles/2013-11-01/the-unbearable-narcissism-of-edward-snowden.

[18] *Review Of The Unauthorized Disclosures of Former National Security Agency Contractor Edward Snowden*, 3–8.

[19] *Review Of The Unauthorized Disclosures of Former National Security Agency Contractor Edward Snowden*, 16.

civil-disobedient for his actions.[20] Snowden appears to self-identify as a whistle-blower that acted rationally to disclose illegal government actions to the public.[21] Regardless of the nature of the information contained in classified documents or the supposed altruistic motives, the unauthorized and improper release of classified material cannot be permitted for national security reasons. The comprehensive government review of the Snowden case ultimately reinforced the inherent internal human-risks associated with national security in the DOD Federal Civilian workforce.

2. DOD Misconduct

In addition to the most egregious insider threats previously discussed, the DOD experiences other forms of federal civilian employee adverse actions including drug and alcohol abuse, embezzlement, assault, security violations, sexual assault, and other misconduct infractions. All forms of adverse action negatively affect the DOD's ability to execute its various missions or create hostile and toxic climates that hinders efficiency. Overall, the DOD faces an average of 17,000 cases annually for federal civilian employees requiring administrative disciplinary actions consisting of 10,000 suspensions, 7,000 removals, and 115 demotions for misconduct.[22] Unfortunately, these statistics may not fully represent the true number of misconduct events and adverse actions concerning federal civilian employees. A recent DOD investigation suggests that federal agencies are underreporting security-related adverse actions as well as general misconduct.[23] Therefore, the DOD federal civilian misconduct statistics are considered higher than reported.

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[20] Kimberley Brownlee, "The Civil Disobedience of Edward Snowden: A Reply to William Scheuerman," *Philosophy & Social Criticism* 42, no. 10 (December 2016): 967, https://doi.org/10.1177/0191453716631167.

[21] Barton Gellman, Aaron Blake, and Miller, Greg, "Edward Snowden Comes Forward as Source of NSA Leaks," *The Washington Post*, June 9, 2013, https://www.washingtonpost.com/politics/intelligence-leaders-push-back-on-leakers-media/2013/06/09/fff80160-d122-11e2-a73e-826d299ff459_story.html.

[22] *Federal Employee Misconduct*, GAO-18-48 (Washington, DC: Government Accountability Office, 2018), 1.

[23] Rene M. Dickerhoof et al., *Personnel Security Underreporting: Establishing Rates and Estimating the Problem* (Seaside, CA: Defense Personnel and Security Research Center, 2019), 32.

With regards to the armed forces, the Uniformed Code of Military Justice (UCMJ) provides military commanders with various options to investigate, charge, and punish personnel for violation of the established codes for minor offenses as well as severe crimes. The majority of infractions or misconduct cases do not require a general court martial proceeding, similar to a civilian trial, and are conducted by commanders at lower echelons called a summary court-martial. In 2018, the armed forces concluded 37,132 summary courts-martials resulting in administrative actions from misconduct.[24] A summary court-martial typically involves minor offenses consisting of non-judicial punishments that do not require dishonorable discharges or confinement up to a year.[25] For more severe offenses and crimes, the armed forces convicted 1,530 personnel through either general or special courts-martial in 2018, as well.

Although the annual number of cases misconduct is considered to be at a low and manageable level for both military personnel and federal civilian employees, severe misconduct can lead to additional future problems as highlighted in the three catastrophic insider attacks from Hasan, Manning, and Snowden. All three of these insider cases involved disciplinary action associated with their professional careers prior to committing their attacks. Simple misconduct, in general, also disrupts workflow and creates unnecessary distractions that hinder focus towards the wide array of requirements to achieve the mission of defending the United States. Suspending, terminating employees, or discharging military personnel, due to misconduct, creates additional workforce gaps as well as expends organizational resources and time to reconstitute.[26]

C. CAPSTONE REPORT OBJECTIVE

There is no doubt that eliminating misconduct and catastrophic insider-threats is important for the DOD on various levels. The three catastrophic insider threat events, described in the previous section, as well as the consistent occurrence of misconduct within

[24] *Reports of the Services on Military Justice for Fiscal Year 2018* (Washington, DC: Joint Service Committee on Military Justice, 2019).

[25] "Manual for Courts-Martial United States" (Joint Service Committee on Military Justice, 2019), V1.

[26] *Federal Employee Misconduct*, 6.

the federal civilian workforce and armed forces provide ample justification for the requirement to improve DOD acquisition methodologies. Based on these recurring threats and misconduct within the DOD, President Barrack Obama issued a memorandum Executive Order 13587 requiring federal agencies to improve vetting procedures for employees with access to classified networks as well as an official memorandum to improve the federal hiring processes to promote better workforce acquisition.[27] In conjunction with President Obamas orders, the Secretary of Defense also issued Directive 5205.16 in 2014 to establish "policy and assign responsibilities within DOD to develop and maintain an insider threat program to comply with the requirements and minimum standards to prevent, deter, detect, and mitigate the threat insiders may pose to DOD and U.S. Government installations, facilities, personnel, missions, or resources".[28]

These mandates unfortunately only establish end-state requirements of eliminating malicious insider threat activity and did not provide methodological procedures or official implementation policies towards that cause. Therefore, the DOD has promoted agencies, such as PERSEREC to research, analyze, and develop methodologies to combat threats from internal personnel. Currently, many counter-insider threat approaches simply focus on the training and education of employees to identify and report specific behaviors associated with historic insider threat occurrences. Unfortunately, internal personnel review processes of current employees are susceptible to failure such as in all three insider threat cases previously mentioned. Since the authorization of the executive orders, DOD directives, and lessons learned from failed internal personnel reviews, no distinct DOD policies have not occurred to incite enhanced methods within the human acquisition process to hire new candidates that do not demonstrate the dispositioned vulnerabilities that lead to future misconduct and insider attacks.

[27] *Structural Reforms to Improve the Security of Classified Networks and the Responsible Sharing and Safeguarding of Classified Information*, vol. 76, EO 13587 (Washington, DC: Federal Register, 2011), 1; and *Presidential Memorandum -- Improving the Federal Recruitment and Hiring Process* (Washington, DC: The White House, 2010), https://obamawhitehouse.archives.gov/the-press-office/presidential-memorandum-improving-federal-recruitment-and-hiring-process.

[28] *The DOD Insider Threat Program*, DoD Directive 5205.16 (Washington, DC: Department of Defense, 2014).

The statistical relevance surrounding the DOD personnel problems, associated misconduct, and significant insider threat activities, concerning the DOD civilian federal workforce and military service members, reinforces the need for reformed methodologies specifically directed towards the human capital acquisition process. In accordance with PERSEREC research objectives, this capstone report's direct intent will focus efforts to promote scientific-based screening approaches within the DOD human capital acquisition phase by utilizing innovative assessment methodologies. The "whole-person" assessment concept is a model implemented by the SFAS course utilizes multiple self-report diagnostic evaluation tools to screen each candidate against metrics and criterion that support the acquisition of Soldiers possessing the desired characteristics of Special Forces operators. Specific mental health and personality diagnostic assessments provide SFAS cadre with data surrounding disqualifying conditions to select stable candidates that do not exhibit critical predisposition threat indicators deemed undesirable for service within the 1st Special Forces Regiment.

The SFAS model demonstrates an innovative approach to target those negative indicators that can be widely replicated throughout the entirety of the DOD acquisition processes for both military personnel and federal civilian workforce. As cited previously, the DOD has already implemented internal security procedures in the attempt to alleviate insider attacks and misconduct for current personnel. Although, these implemented procedures mitigate some of the adverse actions, there are still opportunities to further reduce the threats. Prioritizing methodologies in the acquisition phase is absolutely a necessary starting point, as it is the very beginning of the human capital continuum and provides an approach at the inception of the process.

This report develops a base model, called the Enhanced Assessment Program, that incorporates additional evaluation methodologies that target critical predisposition threat indicators observed in historical insider attacks and cases of severe misconduct to mitigate selecting personnel that commit those actions. The next chapter outlines the current DOD human capital acquisition process, for both federal civilian's and the armed services, as well as provide an overview of the SFAS course methodology. This facilitates the identification of gaps and opportunities to justify the implementation of the Enhanced

Assessment Program in the acquisition process to mitigate future adverse actions, misconduct, criminal offenses, and insider attacks that cause harm to the security of the United States. The Enhanced Assessment Program is designed to be scalable to current DOD acquisition capabilities without overbearing the process while also minimizing excessive financial costs.

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II. DOD HUMAN CAPITAL ACQUISITION PROCESSES

A. HUMAN CAPITAL ACQUISITION OVERVIEW

Most organizations and businesses, both public and private, have different missions, structures, and ideals that make them unique, requiring organizations to develop their own set values and methodologies to recruit, hire, develop, and employ their workforce. All organizations establish specific Human Capital Management (HCM) methodologies that prioritize their workforces as a high-level strategic resource that is the ultimate driver of a competitive advantage based on their mission or objectives.[29] The vast majority of U.S. organizations focus their HCM efforts primarily on enhancing their workforce through internal employee development and optimization methodologies to promote enhanced performance and results after they are hired.[30] Additionally, most attempt to select the best candidates to hire based on the traditional human capital acquisition methodology through a review process of their described knowledge, skills, and abilities (KSA) as well as their professional experience.[31] The current DOD HCM process utilizes these same principle approaches as with comparable large organizations.

This chapter outlines the general DOD federal civilian and armed forces acquisition processes to demonstrate the current gaps and future opportunities to initiate improved assessment procedures. The ultimate goal is to increase the selection of new personnel that are not mentally or behaviorally predisposed to committing insider attacks or engage in

[29] Stephen Young, "10 Steps to Successful Human Capital Management," *Strategic HR Review* 5, no. 1 (November 2005): 24–27; and Mária Sibilová et al., "Information Systems for the Support of Human Capital Management," *Research Papers Faculty of Materials Science and Technology Slovak University of Technology* 27, no. s1 (December 1, 2019): 8–14.

[30] Corine Boon et al., "Integrating Strategic Human Capital and Strategic Human Resource Management," *The International Journal of Human Resource Management* 29, no. 1 (January 2, 2018): 34–35; and Sibilová et al., "Information Systems for the Support of Human Capital Management," 9.

[31] David E. Bowen, Gerald E. Ledford, and Barry R. Nathan, "Hiring for the Organization, Not the Job," *Academy of Management Perspectives* 5, no. 4 (April 1991): 35–51; Michael T. Brannick, Adrienne Cadle, and Edward L. Levine, *Job Analysis for Knowledge, Skills, Abilities, and Other Characteristics, Predictor Measures, and Performance Outcomes* (Oxford University Press, 2012); and Robert E. Ployhart, Benjamin Schneider, and Neal Schmitt, *Staffing Organizations: Contemporary Practice and Theory*, 3. ed (Mahwah, NJ: Lawrence Erlbaum Associates, Publ, 2006).

misconduct throughout the acquisition phase. This objective will require the development of manageable, streamlined enhancements that do not restrict the DOD's ability to meet military end-strength goals or fill critical civilian positions. Assessing the two current DOD acquisition processes is necessary to determine to vital areas to insert improved procedures rather than entirely restructuring them.

B. FEDERAL CIVILIAN ACQUISITION PROCESS

As previously cited, the federal government has directed the establishment of new acquisition procedures to reduce hiring civilian employees that ultimately degrade the organization's capability or security through misconduct and insider-attacks. Therefore, it is necessary to review and analyze the current DOD human capital acquisition process for federal civilian positions in order to identify gaps or opportunities to enhance the process to select better candidates. Generally, the DOD federal civilian hiring procedures primarily assess a candidate's KSAs, experience, as well as conduct background checks or security clearance investigations, as necessary for more sensitive positions, and finally one or more personal interviews are conducted by the hiring agency.

All DOD federal civilian candidates must apply for their desired positions utilizing the USAJOBS federal government website. USAJOBs is a centralized acquisition database that facilitates recruitment for available positions and supports the initial application process to the required federal agencies in the United States that includes the Department of Defense.[32] Federal civilian candidates must adhere to the following detailed online application procedures as define by the USAJOBS acquisition process (see Figure 1)

[32] "Understanding the Federal Hiring Process," U.S. Department of Labor, October 9, 2020, https://www.dol.gov/general/jobs/understanding-the-federal-hiring-process.

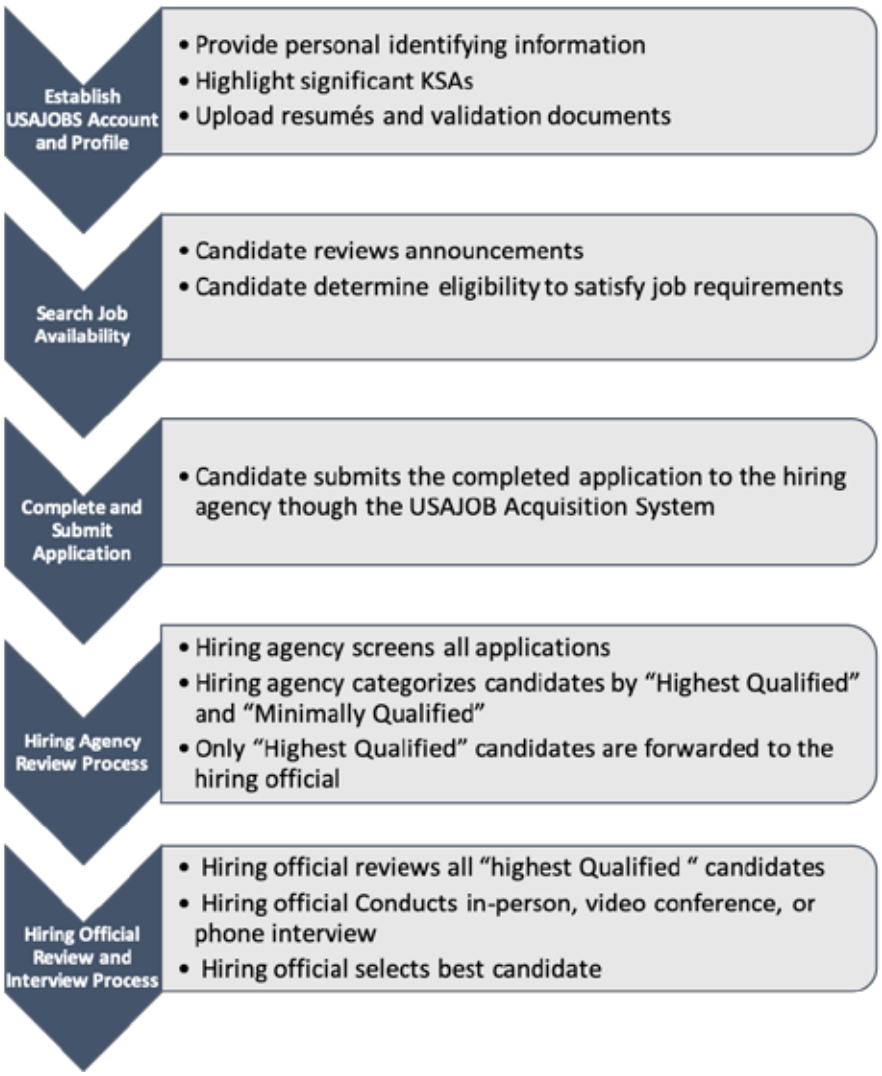
Establish USAJOBS Account and Profile
• Provide personal identifying information
• Highlight significant KSAs
• Upload resumés and validation documents
Search Job Availability
• Candidate reviews announcements
• Candidate determine eligibility to satisfy job requirements
Complete and Submit Application
• Candidate submits the completed application to the hiring agency though the USAJOB Acquisition System
Hiring Agency Review Process
• Hiring agency screens all applications
• Hiring agency categorizes candidates by "Highest Qualified" and "Minimally Qualified"
• Only "Highest Qualified" candidates are forwarded to the hiring official
Hiring Official Review and Interview Process
• Hiring official reviews all "highest Qualified " candidates
• Hiring official Conducts in-person, video conference, or phone interview
• Hiring official selects best candidate

Figure 1. Current DOD Federal Civilian Acquisition Process.[33]

The represented USAJOBS federal civilian acquisition process unequivocally the prioritizes the screening of candidates KSAs and experience. The specific agency's hiring official is responsible for further refining the candidate pool base on their established interview process. Finally, all suitability and security clearance investigations are conducted after a job offer is made by the hiring official to ensure a trustworthy candidate is selected. Unfortunately, background and security clearance investigations are limited to

[33] "Federal Civilian Application Process," USAJOBS, October 9, 2020, https://www.usajobs.gov/Help/faq/application/process/.

methods verifying a candidate's suitability through assessing their historical behavior through verifiable records or personal references. The investigations screen for past unfavorable conduct, criminal records, negative financial considerations, foreign influence, drug and alcohol abuse, mental health disorders, and security violations.[34]

Negative reporting concerning a single screening criterion will not necessarily result in a disqualification for a security clearance or unsuitable determination.[35] For example, a criminal record or previous incarceration is not an absolute disqualifying basis for federal civilian employment, depending on the type or degree of conviction.[36] Mandated disqualifying offenses involve sex crimes, drug felonies, violent crimes, and other offenses concerning child victims.[37] A candidate will be considered unsuitable or disqualified for a clearance when unfavorable documented records or concerning behaviors are identified by the investigators that exceed specific thresholds. It is extremely difficult to disqualify a candidate for a security clearance when historical documentation does not exist based on the investigation process. A candidate may have a mental health disorder and has never been evaluated by a medical provider. They may engage in criminal behaviors or abuse illegal drugs but have never been arrested for such an offense. Therefore, there is no historical documentation within these scenarios for an investigator to provide an unfavorable determination.

Few federal agencies currently incorporate additional screening measures for candidates based on the sensitivity of certain positions. Of note, the Department of Energy Human Reliability Program and the Department of Defense Personnel Reliability Program require additional security clearance and counter-intelligence investigations, medical examinations, psychological testing, and drug screening concerning positions with

[34] Suitability Adjudications, 5 C.F.R. 731 § (2012), 34.

[35] Adjudication Process, 32 C.F.R. 147 § (2014), 695.

[36] "Can I Work for the Government If I Have a Criminal Record?," USAJOBS, October 14, 2020, https://www.usajobs.gov/Help/faq/application/eligibility/ex-offender/.

[37] Criminal History Background Check Procedures, 32 C.F.R 86 § (2012), 424.

responsibilities related to nuclear weapons, equipment, or materials.[38] Federal Bureau of Investigations Special Agent candidates must conduct physical examinations, medical reviews, drug screening, and complete a polygraph test.[39] These types of expanded screening procedure for new candidates are valuable but are not currently widespread approaches within the federal civilian hiring process due to the excessive resources required for implementation.

C. ARMED FORCES ACQUISITION PROCESS

The armed forces acquisition process differs from the DOD federal civilian process in various ways. Military recruits initiate the application process through a local recruiting station for one of the branches of the military. Those local recruiters are responsible for facilitating the acquisition process for each recruit to ensure they satisfy the initial eligibility requirements for service, submit all required documentation, and complete screening examinations through the Military Entrance Processing Station (MEPS). Although each branch of the military incorporates slightly different metrics and criteria to assess a recruit's viability for specific military occupational specialties (MOS), the DOD mandates an overarching acquisition process that applies to all branches in the armed services for both commissioned officers and enlisted personnel.[40] Specific criteria differ by service concerning age requirements, physical fitness testing, height and weight standards, and educational requirements. Every armed service recruit must satisfy minimum eligibility requirements in order to enter military service through their local recruiting station and MEPS (see Figure 2).

[38] Human Reliability Program, 10 C.F.R. 712 § (2018), 18201–5; *Nuclear Weapons Personnel Reliability Program*, DOD 5210.42-R (Washington, DC: Department of Defense, 2018); and Jessica A Baweja et al., *An Evaluation of the Utility of Expanding Psychological Screening to Prevent Insider Attacks*, TR-19-05 (Seaside, CA: Defense Personnel and Security Research Center, 2019), 18.

[39] *Special Agent Selection Process* (Quantico, VA: Federal Bureau of Investigation, 2020), 7.

[40] "Eligibility Requirements," Department of Defense Today's Military, October 15, 2020, https://www.todaysmilitary.com/joining-eligibility/eligibility-requirements.

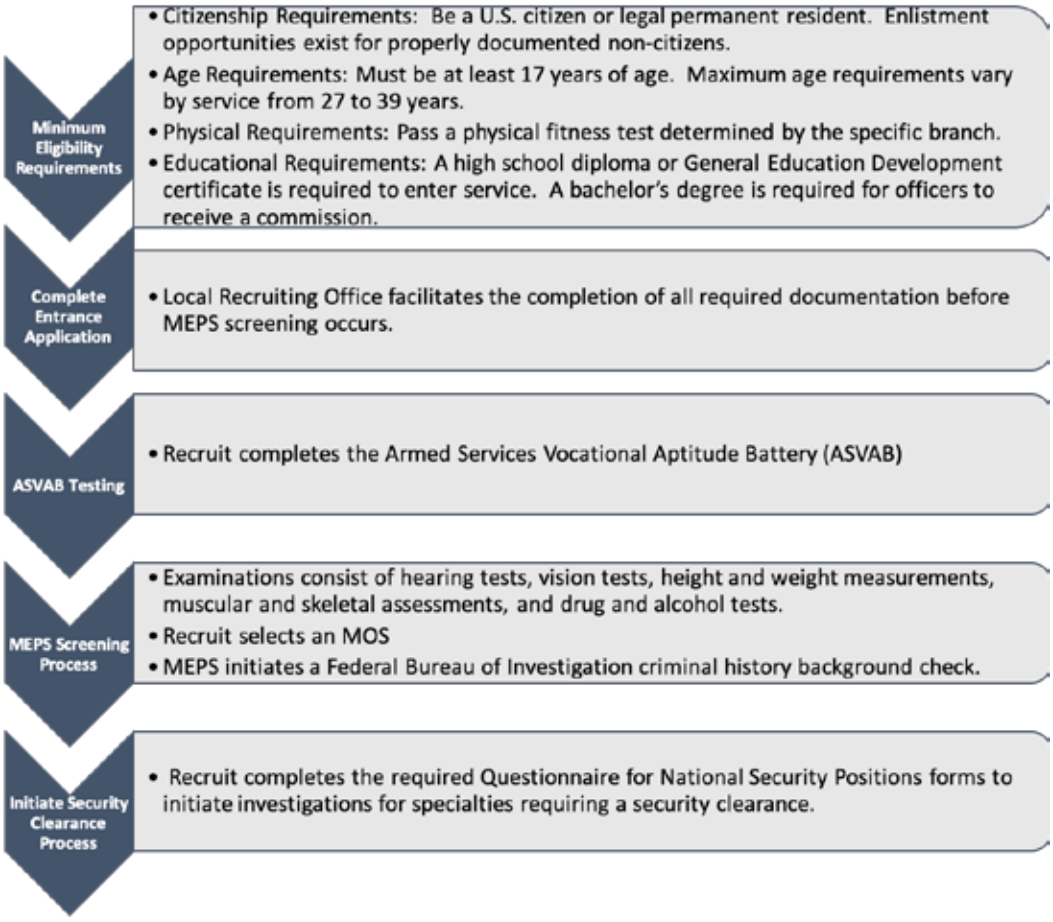
Minimum Eligibility Requirements
• Citizenship Requirements: Be a U.S. citizen or legal permanent resident. Enlistment opportunities exist for properly documented non-citizens.
• Age Requirements: Must be at least 17 years of age. Maximum age requirements vary by service from 27 to 39 years.
• Physical Requirements: Pass a physical fitness test determined by the specific branch.
• Educational Requirements: A high school diploma or General Education Development certificate is required to enter service. A bachelor's degree is required for officers to receive a commission.
Complete Entrance Application
• Local Recruiting Office facilitates the completion of all required documentation before MEPS screening occurs.
ASVAB Testing
• Recruit completes the Armed Services Vocational Aptitude Battery (ASVAB)
MEPS Screening Process
• Examinations consist of hearing tests, vision tests, height and weight measurements, muscular and skeletal assessments, and drug and alcohol tests.
• Recruit selects an MOS
• MEPS initiates a Federal Bureau of Investigation criminal history background check.
Initiate Security Clearance Process
• Recruit completes the required Questionnaire for National Security Positions forms to initiate investigations for specialties requiring a security clearance.

Figure 2. Current Armed Forces Acquisition Process.[41]

The armed forces provide a regimented training pipeline for each MOS and therefore do not prioritize a candidates KSAs or previous experience. Specialty training ensures that graduating personnel achieve the required KSAs to fulfill their future MOS duties and responsibilities. KSAs are only prioritized for candidates with professional degrees seeking to receive a direct commission to enter service within the Medical Corps, Judge Advocate General Corps, and the Chaplain Corps.[42] These specialties require

[41] "Becoming an Officer," Department of Defense Today's Military, October 15, 2020, https://www.todaysmilitary.com/joining-eligibility/becoming-military-officer; andv"Eligibility Requirements."

[42] "Becoming an Officer."

recruits that have earned professional degrees, specific certifications, and experience to fulfill the duties and responsibilities after entering service.

Overall, the objective of the armed forces' acquisition process is to ensure that a selected recruit meets the base requirements for service, is physically capable of serving in the tentative MOS, and embodies a good moral character.[43] The MEPS process and associated testing ensure the physical fitness requirements and knowledge prerequisites to fulfill the service obligations of a specific MOS. Drug testing and criminal background checks facilitate the final screening requirement to identify any historical conduct that negatively exceeds the expected armed forces morality standards. Similar to the DOD federal civilian hiring process, arrests and incarceration will not necessarily eliminate a recruit from entering service. Certain felony convictions require a detailed review of the circumstances and a waiver to enter service.[44] Any offense involving sex crimes, drug felonies, violent crimes, and other offenses concerning child victims will automatically disqualify a recruit from entering service.

The MEPS acquisition process does not currently incorporate initial pre-screening mental health assessments for recruits during the application process. Recruits may be disqualified for certain mental health and behavioral disorders, if reported by the recruit or identified through the MEPS examination process.[45] MEPS mental health screening is limited to an initial application questionnaire and a brief interview with a medical physician for recruits to voluntarily disclose the existence of prior diagnoses, hospitalizations, or treatments regarding mental health conditions.[46] Further evaluation with behavioral experts or psychologist only occurs when a condition is reported by the recruit or suspected by a medical physician at MEPS. Those mental health evaluations provide a clinical

[43] "Eligibility Requirements."

[44] "An Arrest Record Could Keep You From Enlisting," Military.com, October 18, 2020, https://www.military.com/join-armed-forces/disqualifiers-law.html.

[45] *Report on Preliminary Mental Health Screenings for Individuals* (Washington, DC: Department of Defense, 2016), 6; and *Medical Standards for Appointment, Enlistment, or Induction into the Military Services*, DOD Instruction 6130.03 (Washington, DC: Department of Defense, 2018), 44–46.

[46] *Report on Preliminary Mental Health Screenings for Individuals*, 5–6.

medical assessment to qualify or disqualify a recruit for entering military service.[47] These procedures are problematic as a recruit can intentionally neglect to disclose a previously diagnosed condition and pervious research indicates that recruits often do not disclose those conditions during the MEPS process.[48] Additionally, recruits may have a mental health condition that has not been identified or diagnosed at the time of enlistment. Without a pre-screening assessment during the application, it is extremely difficult for MEPS medical providers to identify a significant mental health condition.

Accessing medical records for recruits is an important method for MEPS personnel to verify pre-existing diagnoses or hospitalizations for a specific recruit. The DOD is currently developing the Military Health System GENESIS electronic medical record system for MEPS to gain access to recruits' official medical records. The GENESIS system is intended to synchronize medical record information with federal government agencies and participating federal private medical facilities for MEPS medical providers to gain access to a recruit's records.[49] The official implementation of the system is unknown and until it is implemented MEPS will continue to rely on recruits self-reporting their medical and mental health conditions.

D. ARMY SPECIAL FORCES ASSESSMENT AND SELECTION COURSE

In addition to the initial armed forces acquisition process, there are internal branch selection and assessment processes that military personnel must complete in order to transition to a new MOS or to serve in specialized units after joining a service. Most U.S. special operations forces utilize extensive acquisition methodologies and metrics that involve a multitude of physical, medical, psychological, and intelligence screening assessments to select the best candidates for service within these critical units. The Army Special Forces Assessment and Selection (SFAS) course is an innovative methodology that incorporates a comprehensive approach that extensively evaluates each individual

[47] *Report on Preliminary Mental Health Screenings for Individual*, 5–6.

[48] *Report on Preliminary Mental Health Screenings for Individual*, *12.*

[49] *Improvements Needed in the Management of Enlistees' Medical Early Separation and Enlistment Information*, GAO-17-527 (Washington, DC: Government Accountability Office, 2017), 23–24.

candidate through scientific assessments. The SFAS course is a demanding three-week course designed to test a candidate's physical and mental capability. In 2012, the course was redesigned to incorporate a scientific-based methodology of qualitative and quantitative criterion to select the best candidates. The overall intent of the redesigned course is to evaluate a candidate through enhanced screening procedures focused on a "whole-person" selection concept assessing six defined character attributes of physical fitness, intelligence, trainability, judgement, influence, and motivation.[50] The methodology compiles data from each event, examination, and objective performance evaluations into a set of classified metrics to evaluate each candidate against the six desired Special Forces attributes. Of note, the SFAS course incorporates criteria compiled from various mental health and personality trait diagnostic screening to support the "whole-person" selection concept.

SFAS is a rather extensive selection process. Recruits must first apply to attend the SFAS course due to maximum capacity restrictions for each class. The application process includes initial screening requirements to ensure recruits are highly qualified, physically fit, have not committed misconduct or a UCMJ offense, and that they satisfy SFAS minimum eligibility requirements.[51] Additional screening includes a thorough medical examination, a review of military performance evaluations, and the initiation of a secret security clearance investigation including civilian criminal history checks.[52] Recruits that are accepted to attend SFAS as candidates complete more in-depth, rigorous assessment methods throughout the course

Emphasis is placed on the first week of SFAS to initially assess each candidate as an individual by exploiting their strengths and weaknesses through extensive stress induced evaluations.[53] The battery of examinations determines a candidate's initial physical

[50] Steve Balestrieri, Selecting a Better Green Beret, Interview with Brian Decker, June 2, 2017, https://sofrep.com/specialoperations/selecting-better-green-beret-interview-brian-decker-pt-2/.

[51] "Qualifications and Opportunities of Being a Special Forces Soldier," Go Army, October 2020, https://www.goarmy.com/special-forces/qualifications-and-benefits.html.

[52] *In-Service Special Force Recruiting Program*, USAREC Pamphlet 601-25 (Fort Knox, KY: United States Army Recruiting Command, 2006), 6–7.

[53] *Two Weeks in Hell*, directed by Bobby Williams (Discovery Channel, 2011).

potential, mental health and resiliency, personality traits, and cognitive skills.[54] Each day throughout the first week, candidates that do not achieve the minimum required scores are eliminated from the course and are unable to proceed with further evaluation.[55] The objective is to initially eliminate candidates that do not embody the necessary attributes to withstand the rigors of austere, combat environments associated with Special Forces operations.[56] All candidates must successfully achieve the required minimum scores in order to progress to the second week of SFAS. It is important to note that SFAS assessors do not provide performance feedback to candidates at any time throughout the course.[57] SFAS candidates are also unaware of the minimum required scores for each event or examination they complete. Testing throughout the first week includes various combinations of examinations involving physical, academic, and mental health assessments. The following list of events and screening protocols are historical examples of assessments utilized throughout SFAS over the last decade (see Figure 3).

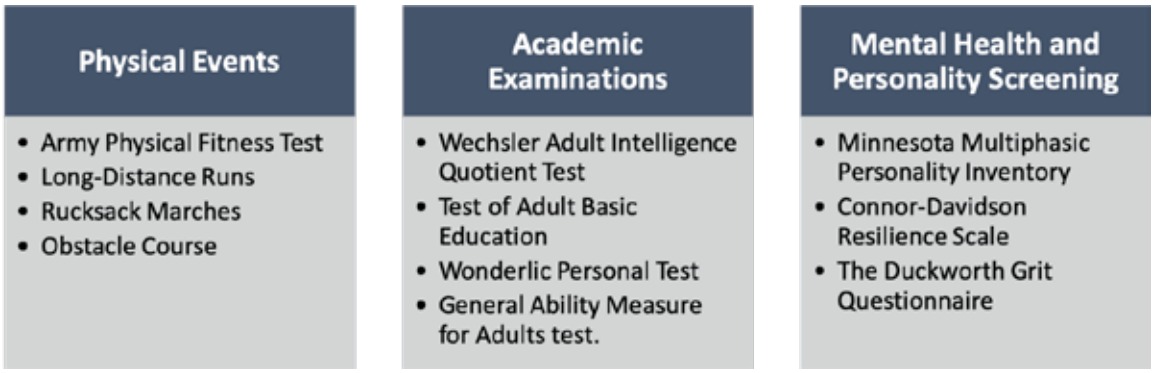
Physical Events
• Army Physical Fitness Test
• Long-Distance Runs
• Rucksack Marches
• Obstacle Course
Academic Examinations
• Wechsler Adult Intelligence Quotient Test
• Test of Adult Basic Education
• Wonderlic Personal Test
• General Ability Measure for Adults test.
Mental Health and Personality Screening
• Minnesota Multiphasic Personality Inventory
• Connor-Davidson Resilience Scale
• The Duckworth Grit Questionnaire

Figure 3. SFAS Screening Events.[58]

[54] Emily K. Farina et al., "Physical Performance, Demographic, Psychological, and Physiological Predictors of Success in the U.S. Army Special Forces Assessment and Selection Course," *Physiology & Behavior* 210 (October 2019): 1–7.

[55] Farina et al., 1–2.

[56] Balestrieri, Selecting a Better Green Beret.

[57] *In-Service Special Force Recruiting Program*, 4.

[58] *In-Service Special Force Recruiting Program*, *4;* Farina et al., "Physical Performance, Demographic, Psychological, and Physiological Predictors of Success in the U.S. Army Special Forces Assessment and Selection Course," 1–7.

Candidates that progress to the second and third week of SFAS complete events to evaluate physical capabilities, teamwork, leadership, and mental resiliency towards assessing the individual character attributes. Week 2 consists primarily of multiple iterations of long-range land navigation tests by foot carrying a weighted rucksack.[59] Candidates that succeed in locating the required amount of assigned points, while maintaining their integrity by following the strict navigation course guidelines, will proceed to the third and final week. The final week includes complex tasks involving moving heavy, awkward equipment over long distances with a team of 12–16 randomly selected candidates.[60] Individual candidates are evaluated on their performance in the final week through a specific rating system from both the SFAS assessors and peer candidates from the assigned team at the completion of the events. Each candidate and SFAS assessor complete an objective performance evaluation questionnaire that ranks every team member in order from best to worst as well as evaluate each candidate according to the six attributes.[61]

Candidates that satisfy or exceed the results for the desired attributes are ultimately selected at SFAS. From another perspective, candidates that fail to achieve the minimum required scores or demonstrate undesirable traits and behaviors are disqualified from contention. The most intriguing opportunities for further analysis are centered around the non-physical evaluations that focus on assessing the character of a candidate through the mental health, personality, and resiliency examinations. These non-physical screening procedures conducted in the first week of SFAS, such as the MMPI and CD-RISC assessments, are manageable self-report questionnaires that require minimal resources and funding to administer to determine the mental health and personality traits of a candidate.

The Minnesota Multiphasic Personality Inventory (MMPI) and Connor-Davidson Resilience Scale (CD-RISC) are utilized as initial screening tools at SFAS to identify tentative mental health disorder, personality disorders, or other concerning traits that would

[59] *In-Service Special Force Recruiting Program*, 4; *Two Weeks in Hell*..

[60] Farina et al., "Physical Performance, Demographic, Psychological, and Physiological Predictors of Success in the U.S. Army Special Forces Assessment and Selection Course," 3; and *Two Weeks in Hell*.

[61] Balestrieri, Selecting a Better Green Beret.

disqualify a candidate from future service in Special Forces. SFAS assessors include trained behavioral psychologists that support the selection process when tentative mental health and personality disorders as well as height and confinement phobias are identified in specific candidates.[62] If the results of the MMPI and CD-RISC assessments indicate concerning disorders or traits, an in-person interview is conducted between the candidate and SFAS behavioral psychologists to confirm or deny those results.[63] The psychologists ultimately provide a clinical evaluation from the interview to determine whether that candidate embodies disqualifying mental health or personality disorders deemed undesirable for service in Special Forces.

The overall intent of this report is to identify proactive approaches that are scalable to enhance the DOD acquisition processes in order to mitigate insider-attacks and excessive misconduct. The SFAS methodology absolutely demonstrates that there are other considerations to incorporate into an acquisition process than simply prioritizing assessments based on a candidate's KSAs. There is no doubt that the three-week SFAS course is absolutely an extensive acquisition process that is resource intensive, time consuming, and unnecessary for non-military organizations. Those challenging physical selection events conducted throughout the course and especially the last two weeks are not the focus of this report.

The redesigned SFAS intent to institute an acquisition process to assess the entirety of the candidates' character and behavior, through the "whole-person" concept, utilizing science-based assessment provides a revolutionary approach to screening the entirety of the candidate. Specifically, the use of mental health and personality screening to identify undesirable characteristics or disorders promotes manageable procedures to enhance the DOD acquisition process to mitigate future misconduct and insider threats. The majority of recent malicious insider-attack perpetrators were either diagnosed or exhibited characteristics with significant mental illness disorders and personality disorders. Of course, there are additional factors other than mental health disorders and personality traits

[62] *Two Weeks in Hell*.

[63] "Special Forces Psych Eval," Inside the G-Base, January 2018, http://insidethegbase.com/the-psych-eval/.

that must be accounted for to effectively characterize insider-attacks and misconduct. The next chapter focuses analysis through historical evidence to better interpret the influences and indicators associated with insider-attack perpetrators and personnel that commit misconduct with the DOD.

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III. INSIDER THREAT FRAMEWORK AND PERSONNEL MISCONDUCT ANALYSIS

A. MALICIOUS INSIDER THREAT FRAMEWORK

An entire research report could be generated concerning the associated indicators, mental health factors, behavioral characteristics, and social distinctions that drive an individual's intent to commit a malicious action towards their country, organization, or fellow employees. Summarizing the important themes and motivations will capture the basic understanding from extensive research conducted by behavioral and social scientists. Therefore, this capstone report will underscore the accepted science and analytical conclusions based on the inherent personal background, organizational influences, and historical indicators that are associated with recent insider attacks.

The malicious framework of insider threat activity is characterized by an individual that historically exhibits negative behavioral attributes, such as misconduct, crime, or violations, embodies concerning mental and personality disorders, and experiences a serious precipitating event considered the catalyst that provides the final motivation for the attack.[64] As previously discussed, PFC Bradley, Major Hasan, and Snowden all demonstrated the defined characterization of this malicious framework for insider threats. These factors; however, are not unique to only the most horrific and catastrophic attacks. Lesser known insider attacks that resulted in loss of life or espionage, accompany the very same characteristics.[65] Unfortunately, these characterizations are exceptionally broad and

[64] M., Creese, S., Wright, G., & Whitty, M., "Understanding Insider Threat: A Framework for Characterizing Attacks" (IEEE Security and Privacy Workshops, University of Leicester, UK, 2014), 217; Frank L. Greitzer and Ryan E. Hohimer, "Modeling Human Behavior to Anticipate Insider Attacks," *Journal of Strategic Security* 4, no. 2 (June 2011): 33; and S. L. Pfleeger, J. B. Predd, J. Hunker and C. Bulford, "Insiders Behaving Badly: Addressing Bad Actors and Their Actions," vol. 5, 1, 2010, 172.

[65] Catina M Smith, Stephanie L Jaros, and Callie J Chandler, *Foreground Factors of DoD Workplace Homicide: A Comparative Case Analysis of Incidents Between 2009-2015*, TR-17-01 (Seaside, CA: Defense Personnel and Security Research Center, 2016); Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," 3–7; and Eric D Shaw and Harley V Stock, "Behavioral Risk Indicators of Malicious Insider Theft of Intellectual Property: Misreading the Writing on the Wall," *American Board of Forensic Psychology*, 2011., 30.

require further dissection to support evidence-based solutions utilizing behavioral science framework to narrow the critical factors.

In the most fundamental sense, a malicious insider threat event requires an individual actor and a targeted organization or their personnel. As documented by a recent report by the DOD Personnel and Security Research Center, every individual's personal background, history, and various social associations are all important aspects towards their state of mind in conjunction with organizational factors related with their professional life that incite their future action.[66] Supporting reports outside of DOD-specific analysis also conclude that a multitude of personal and professional issues within an individual's life culminate towards a decision to conduct an attack.[67] Therefore, an individual's social community, family, mental health, education, and criminal background all contribute to the well-being of that individual. On the other side, the organizational factors consisting of culture, climate, leadership, and interpersonal relationships determine the surrounding environment for an individual, as well. Combining the aspects from the individual's personal life, mental health, and the organizational influences essentially encompass the supporting factors that drive the motivation and willingness for an individual to progress along the described "insider attack pathway" models.

These recent studies concerning insider threat analysis have produced similar models based on a personal profile of the individual as well as their demonstrated "insider attack pathway" that builds over time that provides the rationalization to commit a malicious action against an organization or population.[68] These models all incorporate the varying aspects of the individual's personal, professional, and organizational characteristics that eventually manifest to a level for the individual to conduct a minor

[66] Smith, Jaros, and Chandler, *Foreground Factors of DoD Workplace Homicide,* viii–x.

[67] Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation"; and Greitzer and Hohimer, "Modeling Human Behavior to Anticipate Insider Attacks," 33.

[68] Shaw and Stock, "Behavioral Risk Indicators of Malicious Insider Theft of Intellectual Property"; Smith, Jaros, and Chandler, *Foreground Factors of DoD Workplace Homicide;* Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," 4; and Greitzer and Hohimer, "Modeling Human Behavior to Anticipate Insider Attacks," 32–33.

infraction or misconduct at work. The initial minor misconduct or infraction exacerbates the pre-existing personality disorders, mental disorders, and internal stressors which then escalate to additional personal or professional issues leading to a moderate form of misconduct. The cycle continues until a final major insider attack occurs after a perceived injustice or significant life event that enhances the individual's negative emotions and strains their mental well-being.[69] A perceived injustice or significant life event typically provides the final motive for the individual to rationalize and justify the attack. Most insider attack motives surround revenge, ideology, personal gain, desperation or despair.[70]

It is not simply the presence of anger, stress, or misconduct exhibited by an individual along the Insider Attack Pathway that foments an attack as depicted by the framework. An individual's mental health and historical background typically influence or motivate that individual to actively progress throughout the Insider Attack Pathway. The influential factors are summarized by the five categories spanning mental health, physical health, behavioral history, personality traits, and exposure to significant life events classified as the Vulnerable Predisposition Profile (VPP). The suggested Composite Insider Threat Framework combines all the various inputs from previously established "insider threat pathway" models in conjunction with the developed VPP to provide a visual representation of the science-based theory (see Figure 4).

[69] Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," 7.

[70] Smith, Jaros, and Chandler, *Foreground Factors of DoD Workplace Homicide*, 10–12.

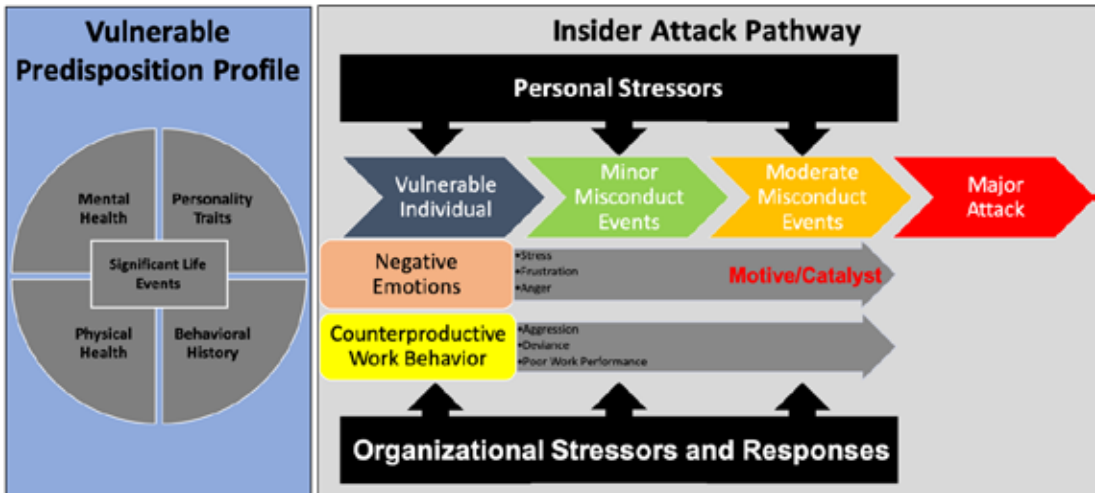

Figure 4. Composite Insider Threat Framework.[71]

B. INSIDER THREAT FRAMEWORK ANALYSIS

Analysis of the various accepted insider threat models and research provide noticeable important similarities that occur both in violent and non-violent insider attacks. This report highlights those insider threat similarities while fusing notable conclusions from the extensive research into a straightforward, cohesive framework. The proposed Composite Insider Threat Framework is not an original concept, but rather a fusion of the multitude of observed inputs from the extensive insider threat research into a concise framework to facilitate innovative methodologies to combat a complex problem set.

Overall, the Composite Insider Threat Framework is extensive as it attempts to incorporate considerations from every aspect of an individual's personal and professional life as well as the organizational influences and actions that escalate to a catastrophic attack. The developed framework compiles two critical models associated with an insider attack separated into the Vulnerable Predisposition Profile and the Insider Attack Pathway to depict those key inputs. The VPP incorporates the five separate categories to provide a

[71] Adapted from Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," 4; Baweja et al., *An Evaluation of the Utility of Expanding Psychological Screening to Prevent Insider Attacks*, 10; and M., Creese, S., Wright, G., & Whitty, M., "Understanding Insider Threat: A Framework for Characterizing Attacks," 216–21.

holistic model to support the evaluation of the well-being and current mind-state of an individual. The Insider Attack Pathway model demonstrates the overarching sequence of events and stressors that a vulnerable individual generally follows before committing a major attack against an organization or fellow employees.

Concerning the VPP, the mental health of an individual appears to contribute particularly to the fundamental intent of an individual to commit an inside attack. Specific Axis II personality disorders are attributed to enhancing the motivation for an individual to progress through the Insider Attack Pathway towards a major attack. An Axis II personality disorder is outlined by the Diagnostic and Statistical Manual of Mental Disorders (DSM) as a clinical grouping of inflexible and maladaptive personality traits that manifest an enduring pattern of behavior in two or more areas of cognition, affectivity, interpersonal functioning, and impulse control in social situations.[72]

An important two-part case study identified that specific combinations of personality disorders were often shared by insider threats. One combination consists of narcissism, anti-social, and paranoid personality disorders and the other combination includes avoidant and schizoid disorders.[73] The narcissistic, anti-social, paranoid combination is significant due to their lack of general empathy for others as well as an exaggerated sense of self-entitlement that ultimately increases the individual's power and revenge fantasies during periods of high stress levels.[74] Although there are overlapping characteristics between the avoidant personality and the schizoid personality disorder, this combination is associated with individuals that incorporate traits of considerable distress and impairment.[75] The avoidant-schizoid combination is consistent with individuals that are hypersensitive to negative evaluation, feelings of inadequacy, detachment from social

[72] *Diagnostic and Statistical Manual of Mental Disorders*, Fourth (American Psychiatric Association, 2000), 686.

[73] Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," 3–4.

[74] Eric D Shaw and Keven G Ruby, *The Insider Threat to Information Systems*, Bulletin No. 2-98 (Washington, DC: Department of Defense Security Institute, 1998).

[75] Lisa Lampe and Gin Malhi, "Avoidant Personality Disorder: Current Insights," *Psychology Research and Behavior Management* Volume 11 (March 2018): 62.

relationships, and limit their range of expression for emotions within interpersonal environments.[76] These characteristics also enhance the corresponding risk of attack when coupled with an individual's negative behavioral actions, stress provoked by significant life events, and workplace misconduct.

Mental illness disorders have also been linked to malicious insider threats as contributing factors within documented reporting of recent DOD-related shootings conducted by Sergeant John Russell, Specialist Ricky Elder, Specialist Ivan Lopez, and Navy contractor Aaron Alexis. These individuals committed violent insider attacks while demonstrating mental illness criteria for one or multiple Axis I clinical disorders concerning generalized anxiety, delusions, major depression, and post-traumatic stress disorders.[77] Analysis suggests that the mental illness disorder intensified their instability and well-being to ultimately influence their decision to commit their attacks. Unfortunately, mental illness disorders can develop at any time during an individual's life and many are extremely difficult to observe in normal environments. Despite this, the predisposition of mental illness disorders must be accounted for within the Vulnerable Predisposition Profile for evaluation and analysis towards mitigating insider threats.

This mental health analysis does not reinforce that anyone that is clinically diagnosed with either of the two combinations of personality disorders or the described mental illness disorders will ultimately commit misconduct or insider attacks. The evidence from the case studies suggests that the majority of individuals that progress through the insider threat framework towards a major attack embody components of personality disorders, mental illness disorders, or both and is a rather important indicator within the entire framework. Screening for certain mental health disorders can support early signaling of individuals susceptible to engaging in misconduct or identify individuals that are reaching a critical point of committing an insider threat attack after behavioral infractions or episodes of misconduct occur.

[76] *Diagnostic and Statistical Manual of Mental Disorders*.

[77] Smith, Jaros, and Chandler, *Foreground Factors of DoD Workplace Homicide*, 14.

An individual's personality is assessed to also be a noteworthy factor within insider attacks. Specific personality traits, centered around the accepted Five-Factor Model, provide insight into the demeanor of an individual and a significant predisposition category in order to determine negative attributes or indicators when assessing a tentative insider threat. The Five-Factor Model consists of organizing personality traits into separate domains of Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience which is designed to provide an assessment determining an individual's pattern of personality traits.[78] As mentioned earlier, personality disorders are generated from an individual's personality traits when the DSM's disorder criteria are met. The assessed personality traits essentially represent an individual's internal tendencies and responses towards various stimuli but is not an absolute predictor of their behavior or reaction to a specific situation. This does not necessarily signify that isolated personality traits are not able to play a role or provide indicators to mitigate insider activity with the absence of a clinical disorder. In fact, Five-Factor Model research and analysis concludes that specific personality domains facilitated the prediction of engagement in counterproductive work behaviors (CWB), misconduct, and increased risk of insider attacks. The research connected individuals that exhibit high neuroticism to impulsive aggression and low results in agreeableness predicted narcissistic aggression.[79] There is also a direct correlation with low levels of conscientiousness and agreeableness as valid predictors for organizational deviance.[80]

The behavioral history category within the VPP is another area that facilitates insight into a tentative threat. Reviewing previous criminal charges or arrests, prior misconduct, deviance, and aggression provides a set of indicators of an individual's capability of continued violent and non-violent offenses. An individual that has engaged in

[78] Robert R. McCrae and Oliver P. John, "An Introduction to the Five-Factor Model and Its Applications," *Journal of Personality* 60, no. 2 (June 1992): 175–215.

[79] Deborah L. Kidder, "Is It 'Who I Am', 'What I Can Get Away With", or "What You've Done to Me'? A Multi-Theory Examination of Employee Misconduct," *Journal of Business Ethics* 57, no. 4 (April 2005): 390.

[80] Jesus F. Salgado, "The Big Five Personality Dimensions and Counterproductive Behaviors," *International Journal of Selection and Assessment* 10, no. 1 & 2 (March 2002): 121.

a criminal act, misconduct, or CWBs, typically continues in other negative acts which usually escalate to more severe forms of the behaviors and do not necessarily happen spontaneously.[81] The same case studies concerning violent insider attacks involving homicide highlight that five of the six attackers reviewed previously committed a criminal act, engaged in workplace misconduct, or had a history of aggression with many of them being involved in multiple events.[82] Historical behaviors, especially violent and aggressive acts, are absolutely an important evaluation criterion within the insider threat framework to predict future misconduct or attacks.

Additional stress, frustration, and despair are typically elevated due to the loss of friends or family members, divorce, financial stress, professional failures or misconduct, and victimization. Insider threat case studies and research have linked these types of significant life events as critical precursors that facilitated a mind-state or motivation to conduct a serious attack.[83] The already vulnerable perpetrators due to their predisposition of disorders, traits, and CWBs were compounded by negative life-events that further thrust them into more emotional turmoil. Unfortunately, these significant life events, which are many times uncontrollable, produce a supporting catalysis that drives a vulnerable individual to commit an attack or misconduct.

An individual's physical health should be considered as an evaluation factor within the framework, as well. Although this category is not as critical of a metric as the other categories, physical health provides another area of concern. The violent and homicidal insider attacks case studies identified significant negative physical health issues in four of the ten researched perpetrators.[84] Serious medical illnesses and physical disabilities

[81] Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," 5.

[82] Smith, Jaros, and Chandler, *Foreground Factors of DoD Workplace Homicide*.

[83] Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," 6; Vargheese et al., *Preventing Kinetic Insider Threat: Assessing Gaps in DoD Insider Threat Policy and Procedure;* and Shaw and Stock, "Behavioral Risk Indicators of Malicious Insider Theft of Intellectual Property," 25..

[84] Vargheese et al., *Preventing Kinetic Insider Threat: Assessing Gaps in DoD Insider Threat Policy and Procedure*, viii.

undoubtedly induce additional stressors and further incite negative significant life events for the individual.

In general, the brief analysis concerning the insider threat framework encompasses a holistic approach to developing a Vulnerable Predisposition Profile, from the five separately assessed categories, while incorporating external factors and pathways to support assessing a possible internal threat. The concise synopsis of each element of the Composite Insider Threat Framework provided a fundamental summary of accepted research and conclusions vetted by insider threat experts, academic case studies, and PERSEREC reports. Overall, the underlying internal instability in conjunction with mounting personal and professional stressors ultimately increases an individual's dangerous emotions to motivate and rationalization their actions.

The behavioral science analyzed in this report demonstrates that there are valid characteristics and similarities exhibited by historical insider threat perpetrators regardless of the type of attack. Incorporating the established evidence of a vulnerable threat against the VPP categories of mental health, physical health, behavioral history, significant personal life events, and personality traits provides a model to develop a focused evaluation methodology (see Figure 5).

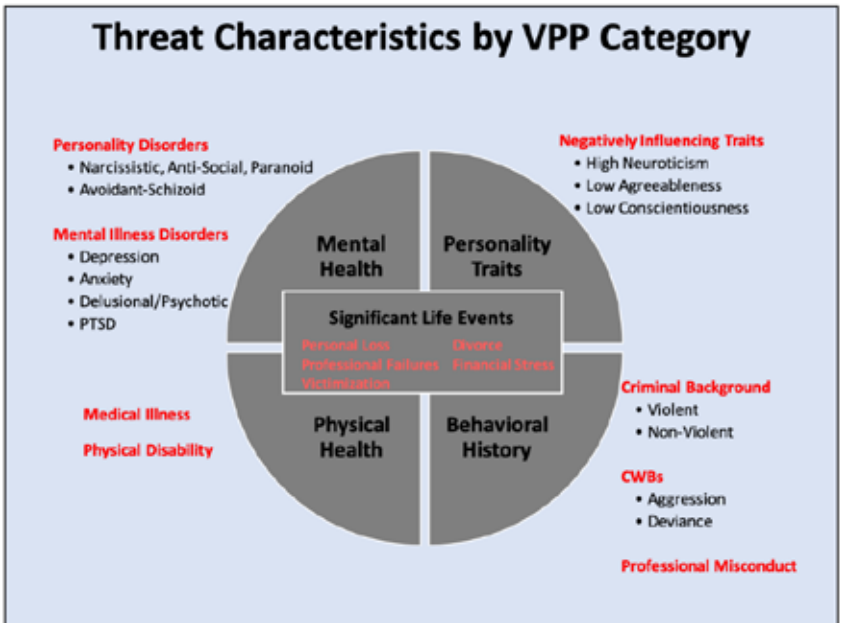

Figure 5. Vulnerable Predisposition Profile Indicators

C. DOD PERSONNEL MISCONDUCT ANALYSIS

Unlike the insider threat framework, there isn't a cohesive behavioral framework for individuals that commit the various forms of misconduct or criminal actions observed annually. As mentioned earlier, there are over 17,000 cases a year of misconduct for DOD federal civilian employees and 37,000 cases of non-judicial misconduct within the armed forces that range from insubordination, alcohol or substance abuse, workplace aggression, violence, misuse of government equipment and funding, and other behavioral infractions.[85] The majority of military and federal civilian misconduct cases are single, isolated events that do not lead to additional serious second offenses or, more importantly, a catastrophic attack as discussed within the insider threat framework. However, a Government Accountability Office study identified that an annual average of 17,600 military personnel, from 2011 to 2015, were discharged from the armed forces due to either a pattern of minor disciplinary infractions, recurring misconduct against good order and

[85] *Federal Employee Misconduct*, 23.

discipline, or from the commission of a serious offense.[86] One-fourth of the federal civilian employee misconduct cases involved individuals committing multiple offenses throughout their employment in the DOD.[87] These are concerning factors as it indicates that there are many DOD personnel committing multiple offenses over years of service indicative of the progression along the Insider Attack Pathway.

Of note, 62% of military personnel discharged from 2011–2015 for misconduct also suffered from one or more of the following mental health disorders consisting of anxiety, depression, PTSD, personality disorders, traumatic brain injuries, bipolar disorders, and substance dependency disorders.[88] The highest percentage of cases involved disorders associated with depression, anxiety, and alcohol or substance dependency. Serving in the armed forces inherently involves significant organizational stressors that places additional personal burdens on military personnel. Similar to the Composite Insider Threat Framework, mental disorders appear to compound those personal and professional pressures leading to an individual to engage in misconduct or CWBs. Unfortunately, many military personnel currently suffer from mental health disorders while serving in the armed forces. A recent report determined that, on average, eight percent of active-duty service members are diagnosed with at least one of the mental health conditions related to personnel being separated for misconduct.[89] The prevalence of these conditions coupled with the enormous stressors regarding military service suggests that misconduct will continue to occur at the current levels given the circumstances.

Armed forces regulations do require service members to receive mental health and behavioral screening from clinical physicians when certain conditions are met or

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[86] *DOD Health: Actions Needed to Ensure Post-Traumatic Stress Disorder and Traumatic Brain Injury Are Considered in Misconduct Separations*, GAO-17-260 (Washington, DC: Government Accountability Office, 2017), 12.

[87] *Federal Employee Misconduct*, 24.

[88] *DOD Health*, 12.

[89] Patricia Kime, "Mental Health Disorders in Troops Far Below National Average," *Military*, September 4, 2019, https://www.military.com/daily-news/2019/09/04/mental-health-disorders-troops-far-below-national-average.html; and Claudia Molins and Gary O Maupin, "Epidemiology of Impulse Control Disorders and Association With Dopamine Agonist Exposure, Active Component, U.S. Armed Forces, 2014–2018," *Defense Health Agency Medical Surveillance Monthly Report* 26, no. 8 (August 2019): 60.

commanders order evaluations to be completed.[90] The documented military cases from the physicians provide the ability for the armed forces to generate statistical reports correlating mental health with misconduct. DOD federal civilians, however, are not subject to such evaluation requirements which does not facilitate the ability to easily analyze misconduct and mental health statistics together. It is estimated that 18.5 percent of Americans, 18 years or older, are diagnosed with one or more mental health disorders annually.[91] Serious depressive illnesses, anxiety disorders, and schizophrenia comprise almost 30 percent of that population with reported mental health diagnoses.[92] It is plausible to infer from these U.S. national mental health statistics that a portion of the DOD federal civilians committing general misconduct each year also have clinical mental health disorders similar to the occurrences within the armed forces.

The large number of misconduct cases within the entirety of the DOD cannot simply be rationalized only by mental health disorders and incidental occurrences. Some misconduct involved in the DOD statistical reporting occur due to unintentional circumstances, an error in judgment, negligence, or issues merely related due to interpersonal conflict that does not escalate into additional misconduct. Regardless of whether the misconduct was deliberate or incidental, the behavioral science-based evidence depicted throughout the Composite Insider Threat Framework provides additional revelations that are directly attributable to understanding general misconduct and CWBs in cases without major attacks.

As outlined in the previous section, CWB research identified that employees who typically deviate from acceptable organizational norms or engage in aggressive behaviors leading to misconduct generally exhibit personality traits consistent with low conscientiousness, low agreeableness, or high neuroticism. Actions exhibited by individuals that deviate from organizational norms center on poor work performance,

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[90] *Mental Health Evaluations of Members of the Military Services*, DOD Instruction 6490.4 (Washington, DC: Department of Defense, 2013).

[91] "Statistical Prevalence of Mental Health," National Institute of Mental Health, February 2019, https://www.nimh.nih.gov/health/statistics/mental-illness.shtml.

[92] "Mental Health Disorder Statistics," Johns Hopkins Medicine, 2019, https://www.hopkinsmedicine.org/health/wellness-and-prevention/mental-health-disorder-statistics.

misuse resources and information, sabotage, and theft.[93] Aggressive acts involve violent physical behavior, inappropriate verbal behavior, insubordination, and unsafe activities.[94] These types of CWBs undoubtedly fracture the workplace environment, delay overall productivity, and expend organizational resources to counteract the associated outcomes Additionally, deviant and aggressive CWBs tend to escalate from less egregious incidents towards more severe behaviors and ultimately misconduct.[95] Personality traits should be considered an important factor in an individual's susceptibility to committing misconduct, as well.

D. ANALYSIS RELEVANCE AND CONCLUSIONS

Although newly developed DOD User Activity Monitoring programs designed as a technological methodology to assess a potential insider-threat is growing, it is not a wide-spread program and is reliant solely on organizational cyber activity.[96] The majority of DOD Counter-Insider Threat programs rely on organizational processes and employees to identify all of the indicators surrounding a potential threat. Most employees are able to assess instances of aggression, workplace deviance, and threatening behaviors involved with most negative personality traits from fellow employees. Employees may also become aware of the personal facets of another employee's personal stressors accompanied by significant life events to help establish additional indicators. Despite this, identifying mental illness, personality disorders, and enduring personality traits is outside the ordinary capabilities for most people. Mental health is an important categorical aspect for organizations to assess in order to completely evaluate a potential threat and intervene before an attack is conducted. Otherwise, what are the criteria thresholds for number of incidents, significant life events, and professional stressors indicators that must occur for

[93] Peter A Metofe, "Antecedents of Deviant Work Behavior: A Review of Research," *Acta Psychopathologica* 3, no. 5 (2017): 1–2.

[94] Shaw and Stock, "Behavioral Risk Indicators of Malicious Insider Theft of Intellectual Property," 5.

[95] Allen et al., "Assessing the Mind of the Malicious Insider: Using a Behavioral Model and Data Analytics to Improve Continuous Evaluation," 5.

[96] *The DOD Insider Threat Program*, 2; *Insider Threat Indicators in User Activity Monitoring* (Defense Security Service Center for the Development of Security Excellence, 2018).

an employee or organization to take significant preventable action? What are the appropriate actions to fully investigate or remove the threat based on the established thresholds? These are the difficult questions surrounding the reliance on employee intuition and assessment when mental health diagnoses are not available.

The current DOD counter-insider threat programs are valuable and necessary as the procedures provide the final barrier to identify, prevent, and respond against an impending threat. As with most wicked problems, multiple enduring policies and programs targeting varying issues are necessary to successfully mitigate the negative effects. Relying simply on supervisors and fellow employees to identify potential threats focuses efforts towards one aspect of the human capital management process. It is important to continue to reassess all programs to identify gaps or opportunities to enhance their effectiveness. Based on the DOD human capital acquisition processes outlined in the previous chapter, there are opportunities to incorporate approaches that reduce employing candidates assessed with extreme-risk profiles.

The important scientific evidence derived from analytical research concerning historical insider attacks and misconduct provides a foundation to incorporate acquisition processes focused on identifying the specific negative characteristics within a candidate's VPP. These categorized predispositions assign factors to develop models that can be screened and evaluated against to create an individualized metric-based level of risk for new candidates. As demonstrated through the extensive case studies and research, there are defined similarities between the insider attack perpetrators such as Hasan, Manning, and Snowden as well as the mass shooting perpetrators conducted by DOD personnel over the last decade. Establishing an acquisition process that incorporates a comprehensive assessment plan from these predisposition characteristics involving criteria related to mental health, personality traits, behavioral history, physical health, and experienced significant life events, will enable the DOD to hire personnel that exhibit reduced threat vulnerabilities and, therefore, are initially less susceptible to becoming future insider threats. Implementing screening measure to utilize self-report diagnostic assessments that are able to identify critical disorders and traits from simple questionnaires provides a

logical starting point to include in the proposed Enhanced Assessment Program detailed later in this report.

Hasan, Manning, and Snowden displayed, or were attributed after the fact, multiple indicators of behavioral issues, CWBs, misconduct, and mental health disorders throughout their employment or military service. Administrative actions were conducted by their respective organizations; however, there were no significant interventions or comprehensive investigations to verify a threat existed. The combination of all of these factors are critical in the Insider Threat Pathway for an individual to commit misconduct or a pattern of misconduct that can lead to a catastrophic insider attack. Without reviewing all of the categorical factors, it is difficult to determine that an individual demonstrates a threat. Similarly, the recent mass shootings involving DOD personnel also demonstrated that the perpetrators shared predisposition criteria as with Hasan, Manning, and Snowden (see Table 1). Unfortunately, it is not apparent whether comprehensive screening of these malicious insider threats would have eliminated them from selection for employment or military service in the first place. This should not insinuate that an acquisition methodology to mitigate insider attacks is not viable and deserves further development.

Table 1. Insider Attack VPP Threat Indicators.[97]

Perpetrator	Mental Health Disorders	Behavioral History	Significant Life Events	Physical Health Issues
Hasan	Paranoid Schizoid	Disobedience Verbal Aggression Anti-U.S. Sentiment	Disciplinary Actions Poor Performance Unexpected Family Losses Racial Victimization Professional Reassignment	-
Manning	Anxiety Gender Identity Disorder Narcissism	Assault Misconduct Verbal Aggression	Violent Misconduct Punishment Poor Performance	-
Snowden	Narcissism Paranoid	Disobedience Anti-U.S. Sentiment Poor Performance Verbal Aggression	Non-Violent Misconduct Punishment Professional Failures	-
Russell	Anxiety Depression PTSD	Attendance Issues Poor Performance Verbal Aggression	Demotion from Misconduct Victimization Divorce Financial Concerns	-
Wells	-	Disobedience Poor Performance Verbal Aggression	Non-Violent Misconduct Punishment Professional Failures	Side Effects from Gall Bladder Surgery
Elder	Anxiety Depression PTSD	Multiple Assault Arrest Aggravated Battery Conviction Theft Misconduct	Non-Violent Misconduct Punishment Criminal Arrests Victimization Financial Concerns	Two Concussions Vehicle Accident Injuries
Alexis	Paranoid	Disorderly Conduct Arrest Discharge of a Firearm Arrest Poor Performance Verbal Aggression	Criminal Arrests Poor Evaluation Ratings	Fractured Ankle Insomnia
Lopez	Depression PTSD	Poor Performance Verbal Aggression	Financial Concerns Divorce Unexpected Family Loss Victimization Negative Professional Counseling	Recurring Medical Issues

The theory behind utilizing the scientific evidence within the Composite Insider Threat Framework is to incorporate accepted screening methodologies into the DOD human capital acquisition process before a candidate is officially hired or serves in the military. Screening and evaluating candidates against insider threat characteristics, identified in the Vulnerable Predisposition Profile, focuses hiring efforts to initially select employees that are not dispositioned to multiple characteristics associated with insider attack perpetrators. The intent of establishing a process to develop an Enhanced Assessment Program focusing effort on screening for mental health disorders, personality

[97] Adapted from Smith, Jaros, and Chandler, *Foreground Factors of DoD Workplace Homicide;* Vargheese et al., *Preventing Kinetic Insider Threat: Assessing Gaps in DoD Insider Threat Policy and Procedure;* Zwerdlin, "Walter Reed Officials Asked: Was Hasan Psychotic?"; Marshall, "Bradley Manning Apologizes."; Devine, "Snowden Is The Kind of Guy I Used to Recruit in Russia."; and Renesar, "The Unbearable Narcissism of Edward Snowden."

traits, behavioral history, significant life events, and physical health is to eliminate extremely high-risk candidates that embody the majority of the insider threat precursors throughout the acquisition process.

The insider threat research has established the mental health and behavioral evidence of typical characteristics of an attack perpetrator. It is important to utilize that evidence to develop an innovative, scalable methodology that is not overbearing to enhance the DOD's current human capital acquisition process in order mitigate insider threats and excessive misconduct. For example, under the current DOD acquisition systems an employment candidate may possess the prerequisite educational background, professional experience, security clearance, and abilities that meet the requirements for a given position or enlistment. Through the proposed additional Vulnerable Predisposition Profile screening, results identify that this KSA-viable candidate possesses five or six of the identified insider threat characteristics of a mental illness, personality disorders, aggressive and deviant personality traits, a negative behavioral history from criminal arrests as well as experiencing physical health issues and traumatic life events. Should the DOD risk hiring a federal civilian or new service member that was assessed to have the majority of traits that accompany insider attack perpetrators? This is an extreme example as not all insider threats demonstrated a negative attribute in every category but the scenario cannot be discounted when compared to the pre-established evidence. Additionally, the DOD misconduct statistics suggest that this type of predisposed individual will tend to engage in CWBs or be susceptible to a pattern of misconduct.

Overall, it will be important not to rely exclusively on a single screening or evaluation tool to assess the complete profile of a tentative candidate. In the next chapter, multiple tests, assessments, and evaluation tools will be examined. Each target specific aspects of mental health, personality, and predictive behavior to create a dataset of results for an initial profile assessment that is able to be incorporated into the DOD acquisition process. Instituting these types of self-report diagnostic assessments into the acquisition process will undoubtedly evoke controversial arguments due to current U.S. employment and privacy legislation. Regardless, this report will outline the scientific evidence as an innovative and supplementary approach to existing DOD Counter-Insider Threat Programs

in order to mitigate future insider attack and misconduct. Actual implementation of the proposed screening methodologies will undoubtedly require new congressional legislation and revised DOD policies.

IV. RELIABLE SELF-REPORT DIAGNOSTIC ASSESSMENT OPPORTUNITIES

A. OVERVIEW AND PURPOSE

The Vulnerable Predisposition Profile within the Composite Insider Threat Framework depicts the various negative individual characteristics associated with insider attack perpetrators and individuals that commit misconduct through the presented evidence in this report. The purpose of this chapter is to discuss the viability of utilizing statistically reliable self-report assessment questionnaires that are intended to provide a tentative evaluation towards identifying mental health disorders, evaluate personality traits, and determine behavioral patterns. Similar to the approach implemented by the SFAS course, self-report questionnaires provide an initial diagnostic evaluation tool that is easily administered and provides near instantaneous results for use in further analysis.

The reliability of self-report diagnostic assessments, in general, has been debated in the behavioral science fields due concerns involving type I errors of commission and type II errors of omission. In self-report assessments, type I errors of commission are referred to as false positives and occur when a respondent is incorrectly included in a specific categorization.[98] Conversely, type II errors of omission occur when respondents are excluded from a specific categorization when, in fact, they should have been included in the categorization.[99] Respondents may become classified into these two types of errors due to their inability to properly understand the assessment's questions and, therefore, unwittingly misrepresent themselves.[100] Another relative factor for consideration is that respondents are able to deliberately misrepresent or distort answers throughout the

[98] Paul Lavrakas, *Encyclopedia of Survey Research Methods*, vol. 1 (Thousand Oaks, CA: Sage Publications, Inc, 2008).

[99] Lavrakas.

[100] Josanne D. M. Van Dongen et al., "Further Evidence for Reliability and Validity of the Triarchic Psychopathy Measure in a Forensic Sample and a Community Sample," *Journal of Psychopathology and Behavioral Assessment* 39, no. 1 (March 2017): 59; and Lavrakas.

screening assessments in order to conceal true results that are deemed negative.[101] Despite this, reliable self-report questionnaires incorporate validity scales to measure the sincerity of the answers provided by the respondent.

Self-report assessments are not without their limitations and results are not absolutely conclusive. It is important to note that these types of assessments are unable to definitively characterize or diagnose the respondent without further assessment to confirm or deny the findings. The results are not intended to be utilized as a method to clinically diagnose a respondent but rather provide initial baselines and underscore behavioral indicators for experts to substantiate through personal examination. Regardless, the reviewed self-report diagnostic assessments have been extensively studied and found to be statistically reliable evaluation tools for initial diagnostic screening purposes.

The following diagnostic assessments demonstrate a current science-based capability to target specific predispositions or predictors concerning areas of mental health, personality traits, and behavioral tendencies. This report does not include internally conducted analysis or reliability testing for the discussed assessments. The intent is to prepare a general overview of existing assessments as examples of initial screening tools for future implementation within the DOD acquisition process. The diagnostic results derived from these various assessments are beneficial to hiring officials to understand predisposition indicators of disorders and negative traits exhibited by tentative candidates. It is recommended that these assessments be utilized as a preliminary screening tool to gather initial results during the acquisition process and not as a conclusive disqualification assessment. If elevated scores or indicators of mental and personality disorders are reported, in-person interviews conducted by mental health and behavioral health experts should be required to confirm the results in order to minimize discrimination through possible errors.

[101] Baweja et al., *An Evaluation of the Utility of Expanding Psychological Screening to Prevent Insider Attacks*, 19–20.

B. MILLON CLINICAL MULTIAXIAL INVENTORY OVERVIEW

The Millon Clinical Multiaxial Inventory-IV (MCMI) is the fourth version of the 30-minute standardized diagnostic assessment consisting of 195 true-false self-report questions initially developed in 1977.[102] The focus of the assessment is to provide a personalized report that assesses response patterns across a broad range of clinical mental health and personality disorders classified within the DSM as Axis I and Axis II disorders. A respondent's results are reported within the MCMI-IV Interpretive Report that summarizes the data to identify tentative diagnoses, including their severity, based on scales assigned to 15 personality disorders and 10 mental health clinical syndromes (see Table 2).[103] Scores are reported for each listed scale based on a range. Response scores that exceed an established threshold are interpreted as elevated indicators of a clinical diagnosis for that scale.[104] The MCMI-IV also incorporates multiple validity scales to measure the authenticity of the responses as well as to detect random responding in order to minimize type I and type II misrepresentation errors.[105]

[102] "Millon Clinical Multiaxial Inventory-IV," Pearson Assessments, 2020, https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Personality-%26-Biopsychosocial/Millon-Clinical-Multiaxial-Inventory-IV/p/100001362.html?tab=product-details.

[103] Theodore Millon, Seth Grossman, and Carrie Millon, *Millon Clinical Multiaxial Inventory-IV Manual* (Bloomington, MN: NCS Pearson Inc., 2015), 11.

[104] Millon, Grossman, and Millon, 7.

[105] "MCMI-IV Annotated Interpretive Report," Pearson Assessments, 2020, https://www.pearsonassessments.com/content/dam/school/global/clinical/us/assets/mcmi-iv/MCMI-IV-Annot-Interp-Sample-RPT.pdf.

Table 2. MCMI-IV Scales[106]

Personality Disorders	Clinical Syndromes
Clinical Personality Patterns	**Clinical Syndromes**
Schizoid	Generalized Anxiety
Avoidant	Somatic Symptom
Melancholic	Bipolar Spectrum
Dependent	Persistent Depresion
Histrionic	Alcohol Use
Turbulent	Drug Use
Narcissistic	Post-Traumatic Stress
Antisocial	**Severe Syndromes**
Sadistic	Schizophrenic Spectrum
Compulsive	Major Depression
Negativistic	Delusional
Masochistic	
Severe Personality Pathology	
Schizoypal	
Borderline	
Paranoid	

The MCMI-IV has been extensively researched to determine the effectiveness to accurately indicate disorders through a simple self-report diagnostic assessment. Overall, the various updated versions of the MCMI have been considered a reliable assessment tool and popular for clinically psychologists to confirm suspected diagnoses.[107] The analysis concerning the MCMI-IV self-report questionnaire supports the accurate screening of mental and personality disorders associated with malicious insider-attack perpetrators and severe misconduct. Specifically, the identification of the vulnerable predispositions of mental health disorders characterized by the DSM as Major Depression, Generalized

[106] Millon, Grossman, and Millon, *Millon Clinical Multiaxial Inventory-IV Manual*.

[107] James P. Choca and Seth D. Grossman, "Evolution of the Millon Clinical Multiaxial Inventory," *Journal of Personality Assessment* 97, no. 6 (November 2, 2015): 541–49; and Lisa M. Saulsman, "Depression, Anxiety, and the MCMI–III: Construct Validity and Diagnostic Efficiency," *Journal of Personality Assessment* 93, no. 1 (January 2011): 76–83..

Anxiety, PTSD, as well as Narcissism, Antisocial, Paranoid, Avoidant, and Schizoid personality disorders is absolutely important as those critical disorders are historically exhibited by catastrophic attack perpetrators. The MCMI-IV, or a similarly reliable assessment, provides a viable approach to implement as a pre-employment screening tool into the DOD acquisition process to mitigate selecting candidates with significant predispositions characterized in cases of serious misconduct or an insider-attacks.

C. FIVE-FACTOR MODEL PERSONALITY TRAIT ASSESSMENTS

Personality trait assessment testing in the United States initially started with the Woodworth Personal Date Sheet in 1917 to screen World War I combat soldiers and has continued to significantly evolve since that time.[108] Currently, there are multiple reputable Five-Five Factor Model personality assessment questionnaires that are scientifically recognized in the behavioral science fields. One of the more well-known and utilized assessments, based directly on the Five-Factor Model, is the Neuroticism-Extraversion-Openness Personality Inventory (NEO-PI). As described in Chapter III, the Five-Factor Model is concentrated on describing an individual's personality traits across the five domains of Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (see Table 3). Malicious insider-attack perpetrators and individuals that engage in CWBs as well as misconduct exhibit negative traits that Five-Factor Model assessments are capable of identifying. Specifically, individuals that engage in organizational deviance at work are linked to low scores in both conscientiousness and agreeableness within the Five-Factor Model. Aggressive CWBs and misconduct are attributed to individuals with high neuroticism or low conscientiousness. Other personality traits, that are on the high or low spectrums of the domains, are also important features in assessing an individual as they corollate to work performance and interpersonal relationships that influence CWBs and misconduct. Aggressive and deviant actions are the most concerning for organizations and require focused effort to combat.

[108] Robert E. Gibby and Michael J. Zickar, "A History of the Early Days of Personality Testing in American Industry: An Obsession with Adjustment.," *History of Psychology* 11, no. 3 (August 2008): 164–84.

Table 3. Summary of Potential Traits Indicated by High or Low NEO Domain Scores.[109]

Domain	High score indicators	Low score indicators
Neuroticism (*N*)	Impulsivity, emotional instability, anxiety or depression	Lack of emotion, excessive self-restraint, failure to recognize problems
Extraversion (*E*)	Reckless, excitement-seeking, excessive self-disclosure, tendency to be socially dominating or controlling	Social isolation and inhibition, flat affect, reluctance to assert oneself, inactive and unsatisfying lifestyle
Openness to Experience (*O*)	Eccentric thinking, preoccupation with fantasy and daydreams, social nonconformity	Difficulty adapting to change, low tolerance or understanding of different lifestyles, lack of creativity or imagination
Conscientiousness (*C*)	Obsession with cleanliness, compulsive behavior, extreme morals and rigid self-discipline	Disregard for rules and responsibilities, personal and occupational aimlessness, inability to self-discipline
Agreeableness (*A*)	Difficulty standing up for oneself, inability to recognize that certain people should not be trusted, excessive generosity that is exploited by others	Cynicism, combative and exploitative behaviors, tendency to be rude or arrogant

Evidence-based research suggests that accepted self-report personality questionnaires, such as the various versions of the NEO-PI, are statistically reliable in assessing an individual's personality traits as well as tentative personality disorders based on the five domains.[110] The NEO-PI-3 is the newest version of the Five-Factor Model personality assessment that consists of 240 self-report questions with five scaled responses from "Strongly Disagree" to "Strongly Agree" requiring no more than 40 minutes to complete on average.[111] The five domains include six detailed facet scales that assess specific behaviors to provide examiners with scores and indicators across each of the 30 total scales (see Table 4).[112] The NEO-PI-3 Interpretive Report not only includes the range

[109] Alicia Carrillo, *Creation and Use of the NEO Personality Inventory-3TM and NEO Five- Factor Inventory-3TM* (Lutz, FL: PAR, 2020), 3.

[110] James A. Carter et al., "Short-Term Stability of NEO–PI–R Personality Trait Scores in Opioid-Dependent Outpatients.," *Psychology of Addictive Behaviors* 15, no. 3 (2001): 255–60; Anupama Byravan and Nerella V Ramanaiah, "Structure of Personality Disorders from the Perspective of the Revised Neo Personality Inventory Domain Scales and the Psychopathology-5 Scales," *Psychological Reports*, 1999, 4; and Paul T. Costa, "Work and Personality- Use of the NEO-PI-R in Industrial/Organizational Psychology," *Applied Psychology: An International Review* 45, no. 3 (July 1996): 17.

[111] Carrillo, *Creation and Use of the NEO Personality Inventory-3TM and NEO Five- Factor Inventory-3TM*, 3.

[112] Carrillo, 3.

of scores but also include summarized personality description based on the five domains and behavioral descriptors for areas of concern for examiners to review.[113]

Table 4. NEO-PI-3 Domains and Facets.[114]

Domains	**Extraversion (E) facets**	**Agreeableness (A) facets**
N: Neuroticism	E1: Warmth	A1: Trust
E: Extraversion	E2: Gregariousness	A2: Straightforwardness
O: Openness	E3: Assertiveness	A3: Altruism
A: Agreeableness	E4: Activity	A4: Compliance
C: Conscientiousness	E5: Excitement-Seeking	A5: Modesty
	E6: Positive Emotions	A6: Tender-Mindedness
Neuroticism (N) facets		
N1: Anxiety	**Openness (O) facets**	**Conscientiousness (C) facets**
N2: Angry Hostility	O1: Fantasy	C1: Competence
N3: Depression	O2: Aesthetics	C2: Order
N4: Self-Consciousness	O3: Feelings	C3: Dutifulness
N5: Impulsiveness	O4: Actions	C4: Achievement Striving
N6: Vulnerability	O5: Ideas	C5: Self-Discipline
	O6: Values	C6: Deliberation

Although the primary purpose of the NEO-PI-3 is to assess a respondent's personality across the five domains, the Interpretive Report describes behavioral tendencies, as well. Overall, personality screening is intended to provide individuals, employers, and clinical professionals with a simple testing method to utilize for acquisition processes or aid medical professionals in clinical diagnosis of mental and personality disorders. For this report, the purpose of incorporating a Five-Factor Model assessment, like the NEO-PI-3, is to screen candidates to identify extreme scores concerning the domains of Neuroticism, Agreeableness, and Conscientiousness as those are the scale predictors for vulnerable predispositions regarding individuals committing misconduct and CWBs.

[113] *NEO Personality Inventory-3 Interpretive Report* (Lutz, FL: PAR, 2020).

[114] Carrillo, *Creation and Use of the NEO Personality Inventory-3TM and NEO Five- Factor Inventory-3TM*, 4.

D. MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

The Minnesota Multiphasic Personality Inventory (MMPI) is a self-report psychological assessment utilized for direct differential diagnosis to describe normal and abnormal personality characteristics, psychopathy symptoms, and behavioral tendencies originally developed in the 1940s.[115] Since the 1980s, the various versions of the MMPI have gained significant notoriety, prevalent use in the clinical field of personality assessment due to the positive empirical reliability evidence, and are consistently updated to enhance scale inconsistencies over time.[116] The MMPI-3 is the third updated version of the assessment released in 2020 consisting of 335 questions and averages 35 minutes to administer using computer-based software.[117] It is a versatile assessment as it can be use in clinical settings to support medical and psychological diagnoses or utilized as a pre-employment acquisition selection tool similar to the SFAS methodology.[118] The assessment includes five scale-groups consisting of Validity, Higher-Order, Clinical, Specific Problems, and Personality Psychopathology totaling 52 individual scales (see Figure 6).[119]

[115] Martin Sellbom and Anthony M Tarescavage, *MMPI-3 Technical Manual* (Bloomington, MN: NCS Pearson Inc., 2020), 2–10.

[116] Irving B. Weiner and Edward W. Craighead, eds., *The Corsini Encyclopedia of Psychology*, 4th ed., vol. 2 (Hoboken, NJ: John Wiley and Sons, Inc., 2010); Paul A. Arbisi, Martin Sellbom, and Yossef S. Ben-Porath, "Empirical Correlates of the MMPI–2 Restructured Clinical (RC) Scales in Psychiatric Inpatients," *Journal of Personality Assessment* 90, no. 2 (February 25, 2008): 122–23; and Leonard J. Simms et al., "Psychometric Evaluation of the Restructured Clinical Scales of the MMPI-2.," *Psychological Assessment* 17, no. 3 (September 2005): 357.

[117] *MMPI-3 Brochure* (Bloomington, MN: NCS Pearson Inc., 2020), 2.

[118] Yossef S Ben-Porath and Auke Tellegen, *MMPI-3 Manual for Administration, Scoring, and Interpretation* (Bloomington, MN: NCS Pearson Inc., 2020), 1–7.

[119] Ben-Porath and Tellegen, 8–10.

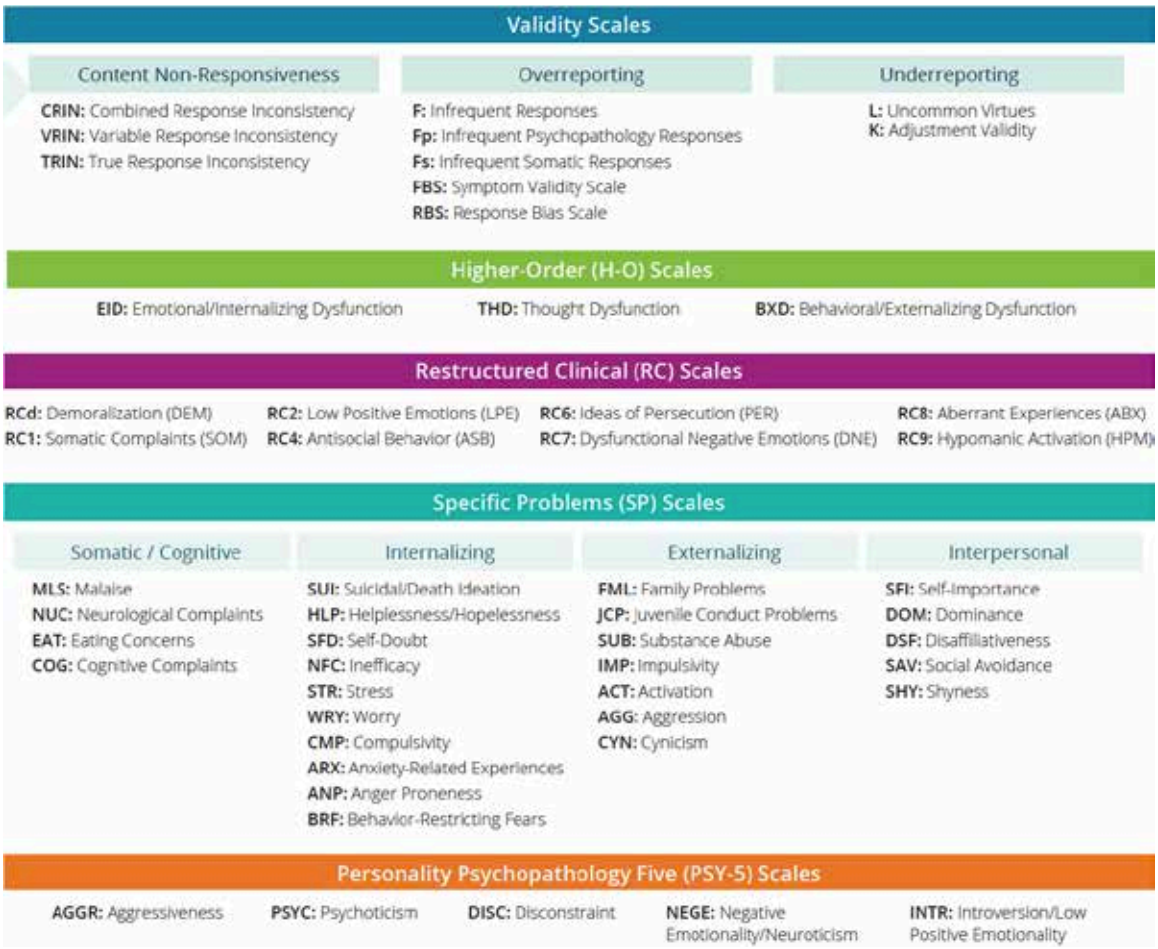

Figure 6. MMPI-3 Scales.[120]

The MMPI-3 Interpretive Report results provide individual score ranges for each scale as well as descriptive diagnostic summaries concerning elevated clinical symptom results. Although the MMPI-3 scales are not in direct alignment with the DSM similar to the MCMI-IV, the MMPI-3 scales are personality driven descriptors to determine behavioral tendencies and clinical profiles based on a respondent's answers.[121] For this reason, the MMPI-3 provides insight or predictors into the negative situational reactions and internalized scales that correlate to behaviors for individuals that engage in CWBs or commit misconduct. Unlike the MCMI-IV and the NEO-PI-3 assessments, scales within

[120] *MMPI-3 Brochure*, 3.

[121] Ben-Porath and Tellegen, *MMPI-3 Manual for Administration, Scoring, and Interpretation*, 2–10; and Weiner and Craighead, *The Corsini Encyclopedia of Psychology*.

the MMPI-3 provide additional analysis concerning abnormal medical health responses, family problems, and drug and alcohol abuse. Another critical component is the robust grouping of 11 embedded validity scales intended to identify inaccurate results by providing examiners with indicators of deliberate deception and inconsistent responses to minimize type I and type II errors.[122]

There is no doubt that the MMPI-3 is capable of being utilized as a primary, stand-alone assessment tool, as indicated through the substantial number of studies documenting the reliability as well as the prioritized use throughout the U.S. Army SFAS course. The assessment screens for a multitude of clinical disorders, personality traits, and behavioral tendencies important to assessing a candidate for vulnerable predispositions. The recommended approach is to administer the MMPI-3 as a complementary assessment in conjunction with the MCMI-IV and the NEO-PI-3. The MMPI-3 screens for clinical disorders as well as prepares results across the five personality domains. Using the MMPI-3 as a complementary assessment enhances response validity through administering a battery of tests instead of relying on one assessment to screen for negative characterizations. The theory is that utilizing a battery of tests will reduce the respondent's ability to deliberately deceive results over multiple tests and questions. Additionally, a battery of assessments will corroborate significant findings to enhance the screening reliability of the other two tests and vice versa.

E. SELF-REPORT DIAGNOSTIC ASSESSMENT CONCLUSIONS

Scientific evidence connecting critical mental health and personality disorders with historical malicious insider attacks and severe misconduct must not be ignored in the pursuit of mitigating future threats. Recent government and DOD orders have directed efforts to institute new human capital acquisitions processes that reduce such threats. Screening new candidates through the described self-report assessments is a critical initial step in the selection process as it is currently the only methodology that identifies behavioral factors corresponding with historical attacks and misconduct. The self-report

[122] Sellbom and Tarescavage, *MMPI-3 Technical Manual,* 9–13; and Baweja et al., *An Evaluation of the Utility of Expanding Psychological Screening to Prevent Insider Attacks,* 23–24.

diagnostic assessments are relatively easy to administer through computer-based software and require less than 40 minutes each to complete. These assessments must be prioritized as a preliminary diagnostic to determine any inclination of concerning disorders or traits within the Enhanced Assessment Program.

It is possible that administering one diagnostic assessment, such as the MMPI-3, is sufficient enough to gather proper results to analyze an individual based on the described evidence. It would also be the most cost effective approach while minimizing additional examination timelines and resources that are incurred through multiple diagnostic assessment. There is a higher probability that more type I and type II errors will occur with results from only one diagnostic. Experts convey concerns that individuals can simply defeat self-report diagnostics through prior research or coaching by deliberately misrepresenting actual responses to questions in order to bypass negative results.[123] Assessments with embedded validity scales are necessary to determine the reliability of the results. Administering a battery of diagnostic assessments decreases the probability for a respondent to deceive the results to conceal tentative disorders or for a respondent to unintentionally misrepresent themselves.

Administering multiple diagnostic assessments will undoubtedly require additional resources, funding, and are more time-consuming. The benefit of using the MCMI-IV and the NEO-PI-3 as principle assessments is that they screen for the particular mental health and personality disorders that align with the associated indicators from historical insider attack perpetrators and individuals that commit misconduct. Individual scores concerning scales identifying clinical anxiety, depression, PTSD, as well as the various personality disorders and traits provide officials with specified results in those prioritized categories. Incorporating the MMPI-3 as a complimentary assessment facilitates secondary validity screening to minimize type I and type II errors. Utilizing a battery of assessments also enhances the reliability of the result for examiners to evaluate through secondary source confirmation.

[123] Baweja et al., 23–24.

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V. RECOMMENDED DOD HUMAN CAPITAL ACQUISITION PROCESS ENHANCEMENTS

A. THE ENHANCED ASSESSMENT PROGRAM INTENT

The vast majority of DOD Counter-Insider Threat Programs are designed to identify, deter, and prevent current employees from committing malicious attacks. The Defense Counterintelligence and Security Agency established an internal department specifically to manage Counter-Insider Threat Programs through research and implementation of wide-spread training mandates for DOD personnel. Government Counter-Insider Threat Program funding has steadily increased over the last few years and is estimated to exceed $69 million according to the 2020 Presidential Budget for Defense Security Services as it is critical to national security.[124] Unfortunately, the current programs do not place significant focus on acquisition procedures to screen candidates and recruits based on the associated VPP indicators referenced in Chapter III. Rather the primary intent is to reduce existing personnel from committing insider attacks. The critical component for current DOD Counter-Insider Threat Programs is for fellow employees to identify a tentative threat and inform security officials. It is a difficult proposition for anyone to determine, without mental health assessments, that another employee is at a breaking point to commit a malicious attack.

Instituting self-report diagnostic assessment screening throughout the human capital acquisition process is absolutely a necessary first step towards mitigating insider attacks and misconduct within the Enhanced Assessment Program. The Enhanced Assessment Program is intended to replicate the SFAS "whole-person" assessment methodology to screen an individual against the critical VPP categories in addition to selecting personnel based on KSAs, experience, and interview performance. Both the DOD federal civilian and armed forces acquisition processes have gaps that do not screen for certain critical VPP indicators considered to elevate the risk of misconduct and malicious insider attacks in predisposed individuals.

[124] *Fiscal Year 2020 President's Budget: Operation and Maintenance, Defense-Wide Defense Security Service* (Washington, DC: Defense Security Service, 2019), 9.

Overall, the recommended program is designed to be scalable to facilitate implementation requirements without overly disrupting the process and minimizing the accompanying costs. In order to adapt the DOD acquisitions processes, while maintaining a manageable system, the Enhanced Assessment Program initially focuses preliminary screening of the critical VPP characteristics concerning mental health disorders and personality traits. The majority of the insider attack perpetrators and personnel engaging in serious misconduct exhibited or were diagnosed with significant mental health conditions and aggressive CWBs prior to their acts. The critical procedure within the Enhanced Assessment Program is to administer self-report diagnostic assessments to initially identify the existence of those VPP disorders and traits. Overall, the goal is to minimize the number of candidates and recruits requiring additional screening measures and, by proxy, reducing the need for excessive resources to interview every individual applicant.

The recommended approach for the Enhanced Assessment Program is to use multiple self-report diagnostic assessments such as the MCMI-IV, NEO-PI-3, and the MMPI-3 to initially assess tentative candidates and recruits. Multiple assessments provide an improved level of validity as well as reliability to minimize type I and type II errors. The goal is to increase the confidence of the screening methodology to conduct resource intensive personal interviews only with individuals whose assessment results indicated concerning diagnoses or traits. The self-report diagnostics assessments are the critical components of the improved acquisition system to target the crucial VPP characteristics involved in malicious insider attacks and serious misconduct. Diagnostic assessment results that report indications of mental health disorders and concerning personality trait scores associated with the VPP model will then require an Expert Evaluation Interview with a government appointed behavioral expert. Otherwise, candidates and recruits continue through the standard process without completing an interview when results do not indicate tentative VPP disorders or traits. Prior to the Expert Evaluation Interview, the individuals criminal report and medical records must be reviewed to support probing questions concerning behavioral history and prior medical treatment. This procedure provides enhancing details for the interview to build an initial profile and maximize individualized information prior to the interview (see Figure 7).

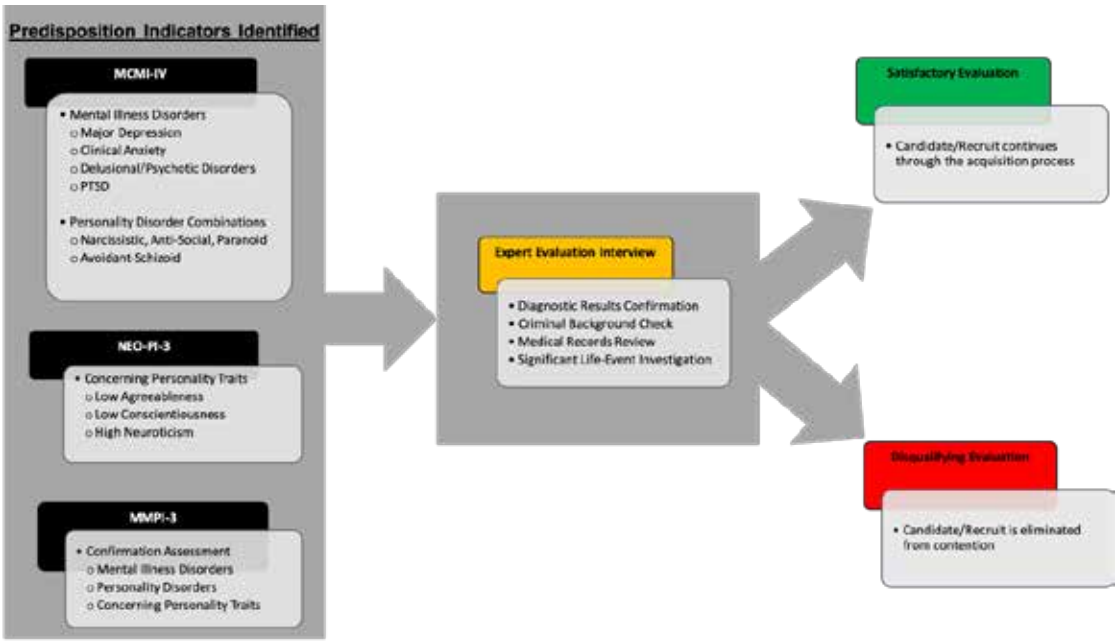

Figure 7. Self-Report Diagnostic Assessment Procedures

The main intent of the Expert Evaluation Interview is to confirm or deny the initial results of the diagnostic assessments. Although multiple interviews with a candidate or recruit provides a more refined evaluation, a single interview is deemed sufficient to determine the existence of significant conditions in conjunction with the diagnostic assessments.[125] A secondary purpose is to develop a profile that evaluates a level of risk associated with that individual based on their reported criminal record, medical history, and significant life events identified through federal databases. The interview process must include additional questioning and investigation along these categories to gather information for a recommended determination. It is necessary for evaluators to utilize a pre-established VPP Risk Matrix that templates a point value for all VPP indicators to determine the associated risk-level for each individual that is interviewed (see Table 5). Each mental health disorder receives two points while the other VPP characteristic receives a single point. The points from all categories are totaled to summarize the level of risk associated for a specific candidate or recruit.

[125] *Diagnostic and Statistical Manual of Mental Disorders,* 686.

Table 5. Expert Evaluation Interview VPP Risk Matrix

Mental Health Disorders	Personality Traits	Significant Life-Events	Behavioral History	Medical Issues
2 Points Each	1 Point Each	1 Point Each	1 Point Each	1 Point Each
Major Depression	High Neuroticism	Personal Loss	Criminal Arrests	Medical Illness
Clinical Anxiety	Low Agreeableness	Divorce	Professional Misconduct	Physical Disabilities
Delusional/Psychotic	Low Conscientiousness	Financial Stress		
PTSD		Victimization		
Narcissistic, Anti-Social, Paranoid		Professional Failures		
Avoidant-Schizoid				

Risk-Level Scale			
Low Risk 0-2 Points	Moderate Risk 3-5 Points	High Risk 6-8 Points	Extremely High Risk 9+ Points

Disqualifying a candidate or recruit for a serious mental health disorder is more straightforward when confirmed through an in-person interview. Armed forces regulations assign disqualifying conditions for maladaptive personality disorders and severe mental illness regarding major depression, clinical anxiety, and psychosis.[126] There are no existing regulations that authorize the DOD to disqualify a candidate or recruit for personality traits. Despite this, the VPP personality indicators for extremely low scores in agreeableness and conscientiousness as well as high scores in neuroticism must also initiate an Expert Evaluation Interview to determine a risk assessment for the individual.

Making an informed decision to disqualify an individual based on negative personality trait indicators rather than mental health disorders is more problematic as there isn't a medical diagnosis involved. In general, the DOD needs aggressive personnel for the armed forces and certain federal civilian positions. However, their aggression must be controllable and manageable. Analyzing criminal behavior in conjunction with cases of concerning aggressive personality trait results will provide supporting factors when assessing the viability of a candidate with concerning personality traits. An individual with aggressive personality traits and arrests for violent criminal behavior demonstrates that there is a greater probability they are incapable of managing their aggression in certain situations. The Expert Evaluation Interview will be crucial in investigating all supporting characteristics of the VPP model to develop a complete profile to determine the level of risk for selecting the specific candidate or recruit. The Enhanced Assessment Program

[126] *Medical Standards for Appointment, Enlistment, or Induction into the Military Services*, 44–46.

provides a sufficient methodology that is not overly demanding for hiring officials or MEPS personnel in the effort to select personnel that do not exhibit VPP indicators.

B. ARMED FORCES ENHANCED ASSESSMENT PROGRAM ACQUISITION PROCESS

The armed forces acquisition process is already a robust system with extensive facilities, personnel, and resources to screen recruits for military service. Due to the established MEPS process, minimal adjustments would be required to incorporate the Enhanced Assessment Program for the armed forces' overall process. The principle factor is incorporating self-report diagnostic assessment procedures as a preliminary screening tool to determine the necessity for further evaluation of a recruit that requires in-person interviews with behavioral health experts to confirm the presence of mental health predispositions.

Mental health screening at MEPS is currently limited to a simple questionnaire and interview for the recruit to report the existence of mental health or personality disorders. Evidence from Chapter II demonstrated that the majority of recruits do not report such disorders as they are disqualifying conditions. Additionally, 40 percent of all military personnel are below the age of 25 years old.[127] There is a high probability that many recruits have never been assessed by a mental health expert prior to their enlistment and are unaware of any official diagnosis concerning the existence of mental health disorders. Without actual mental health diagnostic screening procedures throughout MEPS, the armed forces' process is failing to identify individuals with serious disqualifying disorders that tend to lead to patterns of misconduct, poor performance, and malicious attacks according to the pre-established evidence.

The Enhanced Assessment Program methodology provides the armed forces with a manageable approach to incorporate diagnostic assessments to screen the mental health and personality of tentative recruits. As with the current process, the recruit must satisfy all minimum eligibility requirements and complete the entrance application documentation

[127] "Mental Illness Statistics," National Institute of Mental Health, 2020, https://www.nimh.nih.gov/health/statistics/mental-illness.shtml.

before taking the computer-based ASVAB. The recommendation is to administer all computer-based self-report diagnostic assessments in conjunction with the ASVAB test to utilize the same MEPS facilities, personnel, and computers. This reduces imposing significant additional constraints to the current acquisition system. Self-report assessment scores that are consistent with the associated vulnerable mental health and personality indicators then initiates a mandatory Expert Evaluation Interview with a behavioral health specialist when the recruit is scheduled for the medical examination screening at the MEPS facility (see Figure 8).

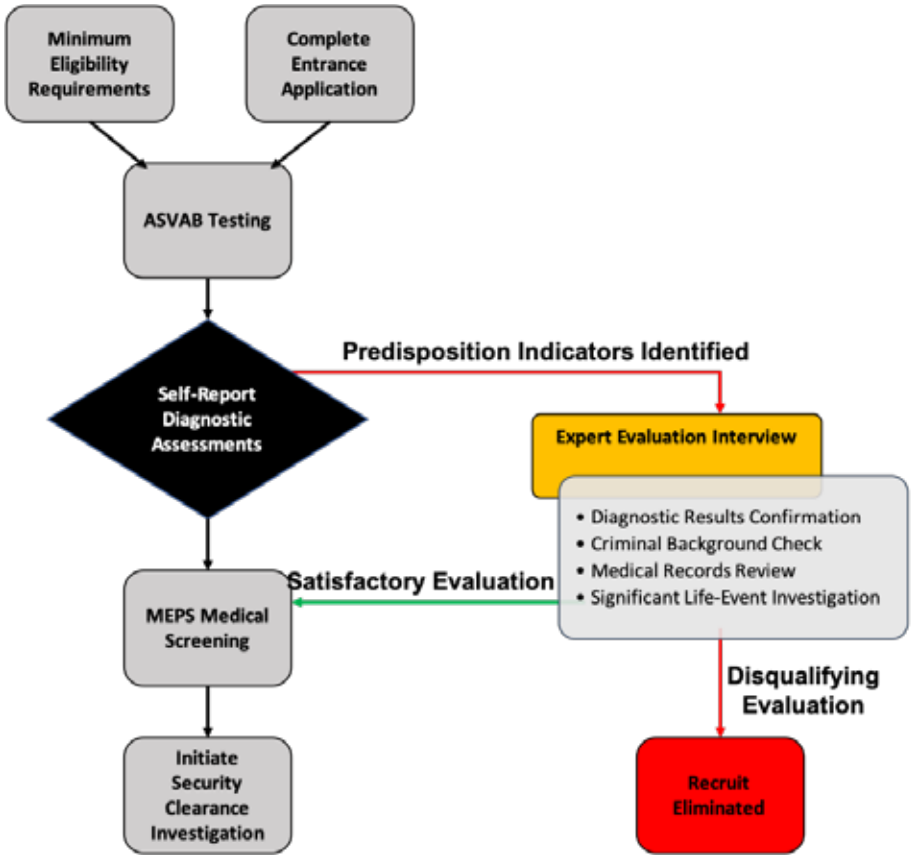

Figure 8. The Armed Forces Enhanced Assessment Program Methodology

The recommended adaptations to the armed forces' acquisition process is minimally disrupted by implementing the additional self-report diagnostic assessments. All recruits are required to take an additional 90-minutes of testing immediately after

completing the ASVAB at the MEPS testing site. Only those individuals that exceed the scores associated with the diagnostic assessment thresholds would require an Expert Evaluation Interview prior to the medical screening process of MEPS. Although the Enhanced Assessment Program screening does not completely revamp the current system, there will be significant costs to implement the new procedures. Additional funding will undoubtedly be required to develop a contract for the diagnostic assessment software and administration tools as well as expanding the number of behavioral health experts at each MEPS location to conduct the Expert Evaluation Interview for tentative recruits. Detailed research is needed to identify the specific funding requirements, personnel, and resources to implement the Enhanced Assessment Program procedures.

C. DOD FEDERAL CIVILIAN ENHANCED ASSESSMENT PROGRAM ACQUISITION PROCESS

Adapting the DOD federal civilian acquisition process is more complex and demanding than with the armed forces' MEPS screening concerning the Enhanced Assessment Program methodology. The federal civilian acquisition process is inherently decentralized which can be completed entirely through virtual application and interview procedures. Additionally, aside from the DOD Personnel Reliability Program, there are no disqualification policies for mental health disorders regarding federal civilian employment as the DOD adheres to the American Disabilities Act. There are two procedural options for the DOD to implement the Enhanced Assessment Program into the DOD federal civilian acquisition process. First, the DOD would need to implement new policies that automatically disqualifies candidates for mental health disorders similar to the armed forces policies. Another approach is for experts to compile an assessment based on the VPP Risk Matrix from information gathered during the Expert Evaluation Interview for DOD hiring officials to incorporate into their overall selection methodology.

At a minimum, any candidate assessed as an "extremely high-risk" in accordance with the VPP risk matrix must be automatically eliminated from contention. The hiring official is then authorized to continue the selection process with the remaining candidates by reviewing their KSAs, VPP risk-level, and interview performance. "High-risk" candidates, if selected, should require justification from the hiring official and a secondary

review from a designated approving authority. It is important to note that either procedural approaches more than likely require congressional legislation to authorize screening federal civilian candidates for mental health conditions and their personal background as intended through the Enhanced Assessment Program process.

Due to the decentralized structure of the acquisition process, efficient procedures are required that will not restrict the process as the DOD employs over 750,000 total civilian personnel.[128] The current DOD federal civilian acquisition process prioritizes evaluating candidates by assessing their KSAs and experience. In order to incorporate the Enhanced Assessment Program methodology, the goal is to initially establish an adapted model that includes diagnostic assessments to screen only the "highest qualified" candidates before hiring officials conduct an interview. This approach minimizes the need to conduct Expert Evaluation Interviews with candidates that are considered "minimally qualified."

The Enhanced Assessment Program screening process requires a slight modification to incorporate the additional diagnostic assessments and Expert Evaluation Interviews. The following process is a concise summary of the order of events required to incorporate the additional screening methods (see Figure 9). It is recommended that the DOD still maintains selecting candidates based on KSA and experience first. Only the "highest qualified" candidates are then instructed to complete web-based versions of the three self-report diagnostic assessment from a personal computer. Any candidate that exceeds the threshold scores for mental health and personality trait VPP indicators must then complete the Expert Evaluation Interview, either in-person or utilizing video conferencing capabilities. There is no doubt that conducting a mental health evaluation over video conferencing is not ideal for behavioral health experts to best assess a candidate compared with in-person evaluations. Video conferencing is a flexible alternative that a centralized governmental department is able to employ as a secondary option when in-person evaluations are impractical. After all candidates meet the required assessment

[128] Jared Serbu, "DOD Plans Civilian Workforce Increase, Especially Health Fields," Federal News Network, March 13, 2019, https://federalnewsnetwork.com/defense-news/2019/03/dod-plans-civilian-workforce-increase-especially-health-fields/.

criteria, the hiring official then conducts the job interviews. The selected candidate is offered the position and a security clearance investigation is initiated, if required.

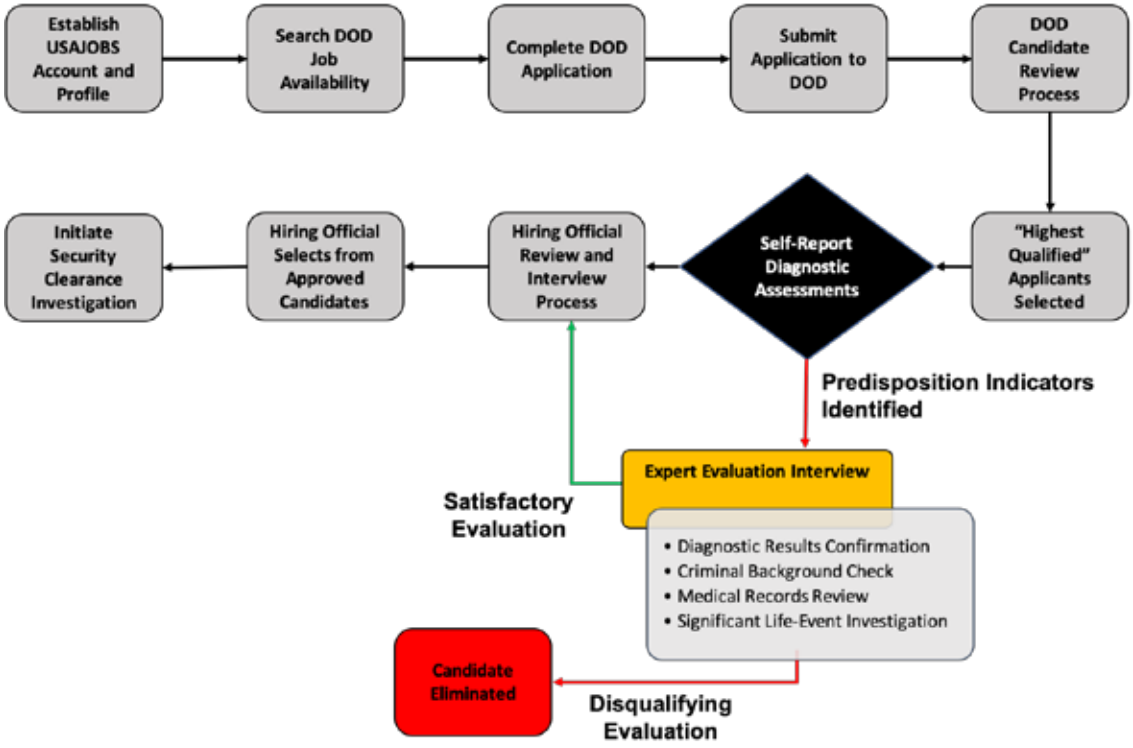

Figure 9. DOD Federal Civilian Enhanced Assessment Program Methodology

Similar to the budget considerations for the armed forces, the DOD federal civilian acquisition process will require additional funding to develop the required infrastructure for the intended Enhanced Assessment Program methodology. Contract funding is necessary to administer the self-report diagnostic assessments as well as develop a department to manage the Expert Evaluation Interviews. It is possible that the DOD federal civilian process could utilize behavioral health experts from MEPS to conduct in-person Expert Evaluation Interviews for candidates within an appropriate driving radius of a MEPS facility. Otherwise, a video conference interview would be the next best alternative. Other options for the DOD are to either develop an internal capability or request support from an external governmental organization such as the Department of Health and Human

Services' Program Support Center Psychological Testing and Evaluation Program to conduct all video conference Expert Evaluation Interviews. Overall, further research concerning budgetary and functional considerations is required to detail the implementation requirements for the incorporation of the Enhanced Assessment Program methodology into the DOD federal civilian acquisition process.

D. ENDURING ASSESSMENT PRACTICES

Although this report focuses initial effort to establish procedures throughout the acquisition process, the general Enhanced Assessment Program methodology should become an enduring practice to manage personnel after they are selected. Establishing a long-standing program to re-assess current personnel in certain situations should be incorporated into DOD Counter-Insider Threat Programs. Mental health and personality disorders develop or increase in severity throughout an individual's life.[129] Re-assessments may identify a mental health or personality disorder years after the individual was initially selected through the acquisition process. Therefore, recurring assessments every five years should be mandated for individual with security clearances. Another recommendation is for re-assessments to be completed for federal civilians conducting an internal department hiring process for a new DOD position. Additionally, all current armed forces enlisted personnel applying to become a Warrant Officer or Commissioned Officer need to be re-assessed throughout the transition process.

At a minimum, policies must be enacted to initiate a misconduct review board and mandate re-assessment screening procedures for the offending personnel in cases of significant misconduct requiring administrative action. The mental health re-assessment will facilitate decisions by leadership in the review board to determining if additional investigation or monitoring is required when an individual isn't terminated from their position or discharged from military service. Overall, the updated mental health screening supports leadership to make appropriate decisions to determine if an individual is progressing through the Insider Attack Pathway through the mandated misconduct review.

[129] "Mental Illness Statistics"; and Baweja et al., *An Evaluation of the Utility of Expanding Psychological Screening to Prevent Insider Attacks*, 22–24.

VI. IMPLEMENTATION CONSIDERATIONS AND CONCLUSIONS

The primary intent of this report is to outline the evidence compiled from scientific research demonstrating the connection between individuals that commit malicious insider attacks and serious misconduct to the Vulnerable Predisposition Profile indicators categories. The most critical predisposition indicators center on mental health disorders and negative personality traits. Therefore, the Enhanced Assessment Program focuses effort to first identify the existence of such indicators through reliable self-report diagnostic assessments as an initial starting point. This approach is intended to minimize committing extensive resources to conduct personal interviews to evaluate every candidate or recruit for indications of mental health disorders. Mandating in-person evaluations for every candidate or recruit is not a feasible practice as it is extremely time consuming and would significantly increase budgetary cost to complete appropriately within the DOD.[130] The only feasible approach to meet the established White House Executive Orders and DOD Policy Instructions to mitigate insider attacks and misconduct is to expand acquisition screening to incorporate self-report diagnostic assessments as a preliminary tool to determine which individuals require addition evaluation before being selected.

There are limitations to this report as it only suggests two defined acquisition processes to reduce the threats of malicious insider attacks and misconduct without significantly addressing tentative implementation concerns. There is validity in utilizing the Enhanced Assessment Program methodology based on the demonstrated evidence. Despite this, arguments and objections that screening DOD federal civilian candidates for mental health and personality disorders is a discriminatory practice against individuals with such diagnoses does have merit. Serving in the Armed Forces or working for the DOD is not an inalienable right but rather a privilege. Government officials must prioritize the national security of the United States over individual sentiment. Congressional legislation would undoubtedly be required for department-wide implementation of mental health

[130] Baweja et al., 23.

screening for DOD federal civilians acquisition processes similar to the exemptions already established for the armed forces' MEPS screening. There is already governmental precedent for such procedures as highlighted by the use of mental health screening in the Department of Energy Human Reliability Program, the Department of Defense Personnel Reliability Program, the Army SFAS course, and for specific positions within the Central Intelligence Agency. Exceptions to authorize the DOD to include mental health screening must be considered when national security is involved.

Another concern is that enacting additional screening measures will possibly inhibit the armed forces from meeting annual personnel end-strength goals for new recruits due to the identification of disqualifying conditions not previously targeted. The DOD federal civilian workforce could face similar issues of not filling critical positions due to new disqualifying screening procedures. Serving in the armed forces is a demanding occupation that naturally incites instances of anxiety, depression, and stress simply due to the extreme organizational requirements. The military is not an organization that facilitates an acceptable environment for individuals that are already predisposed to such clinical disorders which is reason MEPS regulations exist for these disqualifying conditions. Reduced personnel end-strength is a legitimate concern; however, the Enhanced Assessment Program methodology must not be immediately discounted simply from this objection. Especially when severe mental illness disorders, personality disorders, and negative personality traits are link to misconduct and malicious insider attacks.

Establishing the Enhanced Assessment Program is a complex project even though this report considers the program to be the most efficient approach to screening applicants for VPPs. The next recommended research initiative is for the DOD to establish a commission, comprised of experts across the required disciplines, to conduct research detailing the budgetary, personnel, and self-report diagnostic assessment implications to enact the Enhanced Assessment Program acquisition processes. Initial analysis was conducted to estimate the costs, requirements, and effects of implementing such a program; however, this proved to be outside the capability of this report. Those unknown variables and statistics inhibited formalizing a complete analysis. It is essential to develop research studies and pilot programs to determine the annual percentage of federal civilian candidates

and military recruits requiring an Expert Evaluation Interview. This information is critical in estimating the additional behavioral health personnel required for each MEPs location and supporting government departments. The same commission and studies would provide context as to the estimated annual percentage of disqualified candidates and recruits as well as recommend necessary legislation for the implementation.

The scientific-based evidence supports the rationale to incorporate the Enhanced Assessment Program methodologies to mitigate insider-threats and reduce misconduct by identifying VPP indicators. Multiple Counter-Insider Threat Programs and measures to reduce misconduct already exist throughout the Department of Defense. Unfortunately, the negative activities still occur at similar annual rates. It is time to focus effort within the acquisition phase of the human capital management process to target the issue from a different perspective instead of relying on existing programs to make the critical difference. Insider Threats and misconduct are complex problems that require multiple polices to target the various underlying circumstances involved. The current Counter-Insider Threat Programs are absolutely necessary and should still be utilized in conjunction with the Enhanced Assessment Program. There is legitimate credibility based on the evidence outlined throughout this report to institute enhanced measures to assess the entirety of an individual to identify VPP indicators connected to increased risk in misconduct and insider attacks.

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